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WITH the completion of the third volume of THE AMERICAN NEPTUNE, the Editors repeat their annual request that subscribers renew their subscriptions promptly, by means of the reply paid postcard which is enclosed in this issue. The journal was planned, while the United States was still technically at peace, as a cooperative non-commercial undertaking, in which the work was to be divided voluntarily among various 'idolaters of Neptune' who agreed to spare what time they could from their scholarly, institutional or business pursuits. Being at war during two out of three years of publication has inevitably increased the difficulties of production. Fifteen of the Editors and Editorial Advisory Board are on active duty as officers in the armed forces of the United States, and the remainder have less time to give than had been anticipated. In consequence the Editors must rely more than ever before upon the subscribers to minimize the business transactions of the NEPTUNE by renewing promptly and to support the journal by calling it to the attention of libraries and individuals that might be interested.

The number and variety of articles submitted for publication has steadily increased since 1941, and the Editors take this opportunity to thank the contributors for their share in the undertaking. Similarly they

wish to thank the Trustees of the Peabody Museum of Salem for having given the journal a home, and Mr. L. W. Jenkins, Director of the Museum, for having carried out the necessary but wearisome duties of Treasurer of *The American Neptune*, Incorporated, during the past year. They wish also to express their appreciation to their printers, the Southworth-Anthoensen Press of Portland, Maine, for the part that they have played in the publication. Mr. Fred Anthoensen designed the format of the NEPTUNE, and has shown great skill in adapting it to the various types of material that have been included in the past three volumes. The ability and interest of his compositors and proofreaders have saved the Editors much drudgery, and the high standards of his pressroom have never varied. The arrangements which he has made with the Meriden Gravure Company have resulted in collotype illustrations that faithfully reproduce the originals and harmonize with the text, while the close relations of the Press with the bindery of Mr. John W. Marchi have facilitated the binding and mailing of the journal. Constructive co-operation makes the relation between printer and publisher something more than the competent carrying out of a business contract, and the Editors gratefully acknowledge the part that all hands at the Press have played in the production of the NEPTUNE.

An index to the third volume appears at the end of this issue, together with a general title-page and table of contents for the volume. Subscribers wishing to have the standard blue buckram binding may send their copies of Volume III to Mr. Marchi's bindery at 105 Middle Street, Portland, Maine.

Deering and Yeaton, Ship-Riggers

BY CARL C. CUTLER

ALTHOUGH a considerable volume of detailed information regarding the design and construction of the various types of American wooden ships has been preserved in the private papers of master builders, the records of those entrusted with the equally important responsibility of masting and rigging the vessels have been less fortunate. Comparatively few of the thousands of drafts which were undoubtedly prepared and used by old-time riggers have come to light. Some are indeed known to exist, but for the most part, historian, student and model maker alike have been thrown back on the generalities of ancient textbooks, with their casual and sometimes mystifying references to obsolete tools and processes, for information concerning the rigger's art as practiced a century and more ago.

The discovery of an original manuscript record of an early ship-rigger's work is, therefore, a matter of some interest. Such a 'find' was made not long ago by Count Pehr G. A. Sparre. Recognizing its unique value, he purchased it for preservation and has kindly permitted its use as the basis of this article.

About the same time, by a happy coincidence, the museum of the Marine Historical Association, Inc., at Mystic, Connecticut, received from Captain William J. White the remarkably complete and varied collection of rigging and masting equipment which he had used in an active career of more than forty years as 'boss rigger.' During that time he had rigged 365 vessels, including several of the later Sewall ships, a number of the huge five- and six-masted schooners and several of the big schooners built during the brief revival of sailing craft after the first world war. His collection includes items which date from the days of hempen shrouds and single topsails, and which were old and worn with use when Captain White acquired them over sixty years ago.

This collection has been set up in working order in a 'rigger's loft' at the museum under the supervision of Captain White, to show typical

rigging jobs in process and to demonstrate the uses of various sorts of equipment. It is believed that an inspection of this room, together with a study of Count Sparre's manuscript will afford a more intimate and comprehensive understanding of the work and skill involved in rigging wooden ships than most of us have been able to acquire from the material hitherto available.

Count Sparre's manuscript is a thin book bound in light boards, $8\frac{1}{2}$ inches wide by 14 inches high, the paper being $8\frac{1}{4}$ by $13\frac{5}{8}$ inches. It is similar in appearance to the log books commonly in use around the middle of the nineteenth century. The book contains 154 numbered pages of spar plans and rigging specifications, and several unnumbered pages, including the following:

- 1 page containing a memorandum of 'Ships built in 1854.'
- 1 page entitled 'Cost of Rigging of Various Ships' and 'Studg Sail Gier for a Ship of 1200 tons.'
- 1 page, 'Dimensions of Spars of Ship *Great Republic*.'
- 1 page entitled 'List of Chains for Ships of 1000 tons.' It also gives the 'Running Rigging' for a ship of that size, showing that it commonly required 6600 fathoms of manilla ranging from $1\frac{1}{4}$ " to $4\frac{1}{4}$ " in size.

In crabbed but legible hand the main body of the text gives in minute detail a (probably) complete record of rigging work done by the firm of Deering & Yeaton of Portsmouth, New Hampshire, from 1854 to 1864, inclusive, and the work thereafter carried on alone by Deering until the latter part of 1867. The vessels rigged include ships, barks, brigs, schooners, sloops and steamers. The manuscript lists sixty-seven vessels rigged by the firm or by Deering, thirty-five of which were full-rigged ships, and records, in addition, the spar plans of eight other vessels, that is, the first seven and the last named in the index below, which apparently were not rigged by the firm. Drafts of three vessels rigged by Charles Harrat and two by John Mailand are also given, possibly because they were drawn by Deering. The rigging drafts are numbered from two to seventy-three, inclusive.

In a majority of cases the name of the builder, tonnage, spar dimensions, rake and position of masts, size and amount of cordage and contract or day labor cost of the work are given. In some instance where tonnage is omitted, I have added the information, where available, to the index. Where tonnage is not ascertainable, the over-all length of vessel is given to afford a basis for comparison of costs. Such additions are indicated by brackets. Otherwise no changes, corrections or additions have been made.

The index follows:



General view of Rigging Loft at Marine Museum of the
Marine Historical Association, Inc., Mystic, Connecticut

Prominent objects from left to right are: Large lignum vitae fid, used to shape eye splices into circles, the natural shape of an eye splice being a pointed oval. Crude windlass, used to stretch standing rigging while it was being served. Monument, used for square shaping eye of lower standing rigging so it would fit square mast-head snugly. Old type of large fid, also used for shaping eye splices into circular form. In extreme right background—Masting gear set up on miniature shears. This gear was of course never used in a rigging loft but is shown here as stepping the masts was an important part of a rigger's work.



Masting blocks and leadders rove off on dummy shears ready for stepping masts. The mast (here a section of a small spar) was lashed to shackle of lower block by several turns of stout lashing, each turn crossed in shackle and end of lashing finally passed several times around spar to prevent slipping. Standing end of block rope was also made fast around spar. The two largest blocks shown weigh nearly 700 pounds each, and on 90-foot shears have been used to step masts over 130 feet in length and weighing 15 tons.



Close-up of lower masting block, showing method of lashing the mast. On the floor in foreground is the equipment used to cut wire rigging to measure—a V-shaped steel crotch mounted on an oak block, a steel chisel with served wooden handle and a heavy maul.

Deering & Yeaton

NAME OF SHIP	TONNAGE	BUILDER	DATE BUILT	COST OF RIGGING
Schr. <i>Helena F.</i>	109	Tebbetts & Fernald	12 June 1851	\$ Spar plans only
<i>Witch of the Wave</i>	1499	George Raynes	5 April 1851	
<i>J. Montgomery</i>	about 894	S. Badger	July 1852	
<i>Mary Annah</i> (barque)	488	S. Badger	1850	
<i>Whatcheer</i> (bark)	about 334	Fernald & Pettigrew	21 August 1851	
<i>George Raynes</i>	about 999	George Raynes	1850	
<i>Samuel Badger</i>	849	Samuel Badger	6 May 1852	
<i>Express</i>	1173	Fernald & Pettigrew	28 January 1854	632.40
<i>Midnight</i>	1000	Fernald & Pettigrew	18 April 1854	700.00
<i>Chatsworth</i>	1152-72/95	S. Badger	14 August 1854	783.69
<i>Gov. Langdon</i>	1100	Fernald & Pettigrew	15 August 1854	570.00
<i>Ocean Rover</i>	776	Tobey & Littlefield	26 September 1854	725.00
<i>Morning Glory</i>	1114	Union Company	30 October 1854	800.00
<i>Ocean Guide</i> (herm. brig)	282	Tobey & Littlefield	29 November 1854	230.00
<i>Martha Jane</i> (schr.)	195	Tobey & Littlefield	9 April 1855	160.00
<i>W. Freeman</i> (schr.)	135	Arad Tebbetts	12 November 1855	155.00
<i>Noonday</i>	1176	Fernald & Pettigrew	25 August 1855	599.00
<i>Isaac H. Boardman</i>	1500	Fernald & Pettigrew	15 September 1855	715.00
<i>Arkwright</i>	1244	George Raynes & Son	14 July 1855	660.00
<i>Star of Hope</i>	1197	(Mechanic's Yard)	27 October 1855	675.00
<i>Witch of the Wave</i>	1190	George Raynes	28 January 1856	675.00
Schr. <i>Eliza Ann</i>	89		April 1856	80.00
<i>Ella E. Badger</i>	1100	Samuel Badger, Esq.	27 May 1856	550.00
<i>Kate Prince</i>	[1360]	Tobey & Littlefield	19 September 1856	675.00
<i>Charger</i>	[1136]	Mr. Peirce on Peirce Island	28 October 1856	800.00
<i>James Buchanan</i>	1100	Samuel Badger	28 June 1856	Rigged by Chas. Harrat
<i>Annie Sise</i>	1030	George Raynes & Son	12 November 1856	665.00
<i>Sagamore</i>	[1163]	John Yeaton	1856 (Rigged by Mr. Harrat)	575.00
<i>Alice Bell</i>	[898]	Tobey & Littlefield	1 April 1857	535.00
<i>Vandalia</i> (sloop of war)	[981]	Refitted at Navy Yard	Summer 1857	
Schr. <i>Dashing Wave</i>	[76'2" o.a.]	Arad Tebbetts	11 June 1857	95.00
<i>New Hampshire</i>	[1000]	Samuel Badger, Esq.	17 October 1857	575.00
<i>Mary Washington</i>	934	George Raynes & Son	30 September 1857	575.00
<i>Rockingham</i>	[976]	Portsmouth Shipbldg. Co.	25 April 1857	560.00
<i>Yankee Maid</i> (schr.)	[70'3" o.a.]	Arad Tebbetts		40.00
<i>Como</i>	[943]	George Raynes	7 October 1858	640.00
<i>Henry Hastings</i>	[168'3" o.a.]	E. G. Peirce	24 November 1858	600.00
<i>Shooting Star</i>	[947]	George Raynes	8 February 1859	625.00
<i>T. H. Cushing</i> (schr.)	[75'8" o.a.]	Built in Dover, N. H.	25 April 1859	70.00
<i>Camilla</i> (schr.)	[73'3" o.a.]	Charles Stimson	18 May 1859	61.20
<i>L. H. Stewart</i> (schr.)	[83'6" o.a.]	John Neal	5 September 1859	90.00
<i>Sabine</i>	[696]	Samuel Badger	1851 (re-rigged)	541.03
<i>Richard 3rd</i>	[898]	Tobey & Littlefield	8 November 1859	570.00
<i>Liverpool Packet</i>	[992]	Tobey & Littlefield	5 May 1860	550.00
<i>Fanny Boardman</i> (schr.)	[86'8" o.a.]	Snow & Badger	5 May 1860	175.00
<i>Manchester</i>	[185'5" o.a.]	Tobey & Littlefield	(Contract with end service)	575.00
			(Contract with no end service)	550.00

NAME OF SHIP	TONNAGE	BUILDER	DATE BUILT	COST OF RIGGING
<i>Santee</i>	[1078]	Tobey & Littlefield	30 October 1860	600.00
<i>Piscataqua</i>	[187'8" o.a.]	John Neal	1 December 1860	570.00
<i>Frank Pierce</i>	1143	Fernald & Pettigrew	1852 (rigged by Charles Harrat)	
<i>City of Montreal</i>	[1159]	Tobey & Littlefield	26 March 1861	575.00
<i>Schr. Active</i>	240	S. S. Badger	24 December 1862	160.00
<i>Schr. Pioneer</i>	[369]	Wm. Fernald	1863 (rigged by John Mailand)	
<i>Schr. Mary Willey</i>	132	Wm. Fernald	28 June 1864	140.00
<i>Daniel Marcy</i>	1032	Capt. Marcy	28 October 1863	827.42
<i>Coronation</i>	[1150]	Tobey & Littlefield	1 August 1863	750.00
<i>Simla</i>	[1113]	Tobey & Littlefield	27 October 1863	775.00
<i>Schr. Albert Clarence</i>	[101]	Wm. Fernald	26 October 1863	165.00
<i>Schr. Fannie A. Bailey</i>	[272]	S. S. Badger	17 May 1864	210.00
<i>Bark Brothers</i>	[384]	Wm. Fernald	28 May 1864	545.03
<i>Steamer Gen. Grant</i> (ship rig)	1480	Tobey & Littlefield	24 May 1864	880.00
<i>Schr. Norah</i>	[129'1" o.a.]	John Neal	31 July 1864	325.00
<i>Pioneer</i> (steamer)	[97'8" o.a.]	John Townsend	8 June 1864	150.51

"THE END OF DEERING & YEATON"
CONTINUED BY DEERING

NAME OF SHIP	TONNAGE	BUILDER	DATE BUILT	COST OF RIGGING
<i>Tartar</i>	[171'8" o.a.]	Tobey & Littlefield	29 March 1865	675.00
<i>Schr. Undine</i>	[81'6" o.a.]	J. E. Townsend	19 May 1866	336.51
<i>Yacht Alice</i> (sloop)	[55'8" o.a.]	J. E. Townsend	19 May 1866	253.34
<i>Bark Asphodel</i>	488-29/100	D. D. Badger		480.00
<i>Schr. Mary J. Adams</i>	231	John Neal	5 April 1866	280.00
<i>Schr. Piscataqua</i>	[64]	Augustus Stephenson	7 April 1866	90.00
<i>Schr. Sassamon</i>	[29]	George Prebble at Prebble's Island	1866	70.00
<i>Simla</i>	[1113]	Dismasted. Rerigged	May 1866	812.00
<i>Sarah Louise</i> (schooner)	[102]	Built at Cape Neddick Rigged by contract	Oct. 1866 for Mr. Goodin	145.00
<i>Semiramis</i>	1189	Tobey & Littlefield	9 October 1866 (Rigged by John Mailing)	
<i>Bark Niobe</i>	[701]	S. S. Badger	22 June 1867	590.00
<i>Schr. Mary E. Caswell</i>	27	W.K. Prior 'Nobles Island'	20 April 1867	30.00
<i>Schr. Wm. Bayles</i>	[71'6" o.a.]	Refitted 1 June 1867		137.58
<i>Schr. Mary J. Marden</i>	[9]	W. K. Prior at Nobles Island		25.00
<i>Yacht Daisy</i> (sloop)	[31'6" o.a.]	W. K. Prior at Nobles Island	13 June 1867	20.00
<i>Yosemite</i>	1153-84/100	Tobey & Littlefield	29 October 1867	900.00
<i>Schr. Genl. Grant</i>	[50]	Nudd, Hobbs & Co. at Hampton	13 September 1867	90.00
<i>Great Republic</i>		Donald McKay East Boston	1853 (Spar plan only)	

The striking fact disclosed by the above index is the surprisingly low labor cost of rigging a ship eighty or ninety years ago. Full-rigged ships measuring 1,000 to 1,200 tons cost as a rule from \$600.00 to \$700.00 to

rig, with a decided tendency toward the lower figure. In one instance, that of the *Alice Bell*, 1,082 tons, the work was done for \$535.00. The figures given of course in no case include the cost of cordage, chain and fittings, which were furnished either by the builder or owner.

Since rigging involved stepping the lower masts, ranging from around 70 to 138 feet in length,¹ and from 4 to 15 tons in weight,² and sending up the twenty or thirty upper spars and yards, in addition to cutting, fitting and setting up miles of cordage and chain, and all the innumerable jobs of worming, parcelling, serving, turning in dead-eyes, making and fitting foot ropes, strapping blocks, seizing on fair leads and bull's eyes, rattling down, and reeving and finishing off still more miles of running rigging, it is evident that the usual rigging gang of fifteen or twenty men, not only had to be extremely adept, but had to work hard and fast for long hours at a low wage. From contemporary sources we learn that a competent rigger of the period received from \$1.00 to \$1.25 for a day's work which varied from ten to twelve hours in length. Boys and young men learning the trade and acting as helpers received much less. Later, in the eighties and nineties, the pay ranged from \$1.50 to \$2.00 for a ten-hour day, with no allowance for overtime pay. But whatever the wage, speed, neatness, accuracy and endurance were prime essentials to holding the job.

Another fact to be noted is the surprisingly small difference between the cost of rigging small vessels and the large full-rigged ships. Thus the bark *Brothers*, 384 tons, cost \$545.03, while contracts for several full-rigged ships measuring between 1,100 and 1,200 tons were taken at figures ranging from \$550.00 to \$575.00. The explanation lies partly in the fact that although the cordage was lighter, the difference in the actual amount of work required was relatively slight, and partly in the quality of the work done. There were gradations in quality of rigging work, as in hull construction. For instance, near the end of the manuscript we find a notation that the *Gov. Langdon*, of 1,100 tons, got an 'ordinary rig' for \$570.00, while the rig of the *Ocean Rover*, of 800 tons, costing \$725.00, was described as 'fine work.' Extras, such as rope strapping for blocks and end service of standing rigging, added to the cost.

The chief interest of the manuscript, however, lies in the minutely detailed rigging drafts, of which the following is typical:

¹ It should be noted that these bigger sticks were put in the big later ships for the most part and — aside from rare cases — not in the ships being built when Deering and Yeaton were active.

² In stepping masts the rigger had to pull against the strain of 'holding-off tackles,' which were used to steady the spar and to keep it from crashing into the side of the ship. Accordingly, in lifting a mast weighing 15 tons, the actual lifting strain was at least 25 tons and might be as much as 28 tons.

Star of Hope, 1, 197

Dimensions of Ship				Ft.
From Knight heads to center of Fore Mast				43
Center of Fore to		"	Main	61.5
"	Main to	"	Mizen	54.6
"	Mizen to	"	Tafferrail	42.
				200.11
"	Fore Mast to Main Stay Bitts			3
"	Fore Mast to topmast Stay Bitts			16
Catheads abaft Knight heads				11½ ft
Breadth at Fore Mast 35, Main 35.4, Mizzen 32.4				
Depth Fore Mast 25.7, Main 24.2, Mizzen 24.4				

SPARS

	Length	head			
Fore Mast	76	14	Fore Yard	74	arm 3
Topmast	45½	8	Topsail	65½	2, 8
Top Gallant	24		Topsail	58	2, 4
Royal	16		Top Gallant	44	2
Skysail	12		Royal	36	1½
Pole	6		Skysail	30	1
Main Mast	79	14	All Spars at the Main a duplicate of these		
All the rest the same as forward			Cross Jack Yard	60	2½ arm
Mizen Mast	71	12½	Topsail	52	1, 8
Topmast	37½	6½	Topsail	45	1,
Top Gall	20		Top Gall	34	1
Royal	13		Royal	30	9 in.
Skysail	10		Skysail	25	6 in.
Pole	4		Rake of Masts ¾ - 1 - & 1¼" to the foot		

Bowsprit out board top side 24 ft.

Gibboom 16 - 14 - & 12, Spanker Boom 44 3 end

Gaff 36 8 "

Spencer Gaff 15 2 "

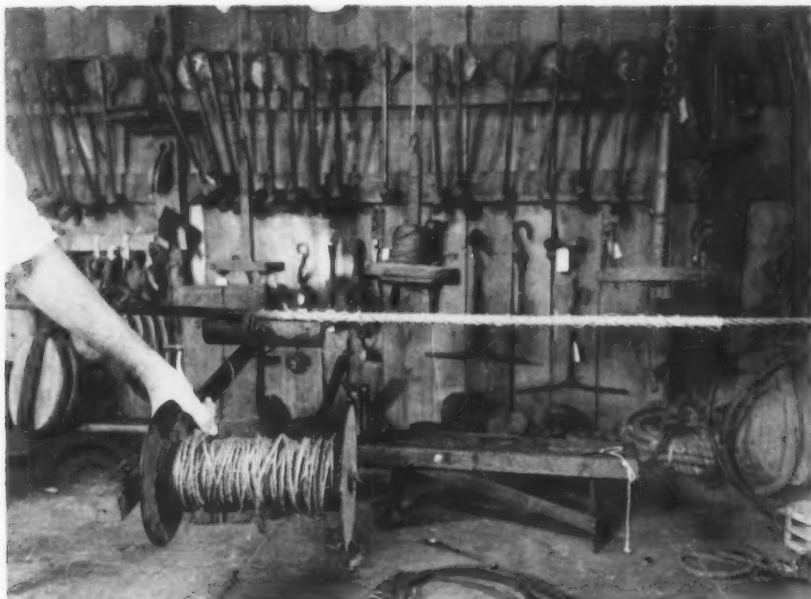
Launched from Mechanic's Yard Oct. 27th, /55

Sailed for N. York Nov. 30 - Capt. Somerby

Howes Rig - Patent Blocks - Rigged by Contract \$675.00

RUNNING RIGGING

Fath	Size	Fath	Size	Fath	Size
190	4½	900	3 in	400	1¾
175	4	1200	2¾	400	1½
100	3¾	1250	2½	300	1¼
150	3½	1100	2¼	300	1
260	3¼	1000	2	7725 fath	



The serving mallet was thrown over the shroud with one hand and brought under with the other to complete the revolution. The rigger repeated this operation rapidly hour after hour, stopping only to shift the shroud along on the 'stretch' after serving a 20- or 30-foot section, or to replenish the reel with spunyarn from the 'whirligig.'



Serving standing rigging with a 'serving board,' which was used where the large 'serving mallets' (shown at left) could not be used conveniently. With these simple tools the work of serving was accomplished with great rapidity. 72 turns of spun yarn tightly wound served a foot of rigging and required from 2 to 2½ minutes to put on. Serving boards and mallets were of varying weights and sizes, depending on nature of work to be done. Suspended from ceiling in background are 'whirligigs' on which 'shots' of spunyarn were placed for convenience in rewinding them on to the revolving holders on the serving mallets.

Rigging Loft of the Marine Historical Association, Inc.,
Mystic, Connecticut



Making eye splice in wire rigging around dead-eye. The marlin spike spreads the strands and the proper strand is tucked through, after which the marlin spike is turned back forcing the tucked strand down snugly in place. Each of the six strands is tucked in turn and then once again, after which each strand is split and half the strand is tucked to taper the splice. Then the splice is served and finished result is shown in the dead-eye lying on the 'heading off bench.'



Last step in making eye splice in standing rigging was to pound it down over fid to give it a circular shape so that it would fit a round spar snugly. The lower shrouds which were to fit the squared mast-head were seized together (not spliced) and pounded down over the 'monument' at left to give them a square shape.

Rigging Loft of the Marine Historical Association, Inc.,
Mystic, Connecticut

MEM OF CORDAGE	Fath	Size
Fore Shrouds	83	10
Main Shrouds	94	10
Mizen Shrouds	52	7½
Fore & Main Stays	46	9
Mizen Stay Double	22	5¾
Fore Topmast Stays	41	8½
Main Topmast Stays	38	8½
Fore Topmast Back Stays	48	10
Main Topmast Back Stays	52	10
Mizen Topmast Back Stays	56	7½
Cargo Spar & Fish Pendant		
Inner Gib & Guys		
Tye Runners & Fish Painter	55	6½
Outter Gib Stay & Guys	80	5½
Fore Top Gall Stay		
Fore Top Gall Back Stays		
Main Top Gall Back Stays	64	5½
Fore Royal & Mizzen Top Gall Back Stays	68	5½
Main R. B. Stay & Spanker Boom Top Lifts	66	4¾
Main Top Gall & Mizzen Topmast Stay	60	4¾
Fore & Main Royal Stays & Lifts	28	6½
Mizen Royal Back Stays	101	3½
Fore & Main Skysail Stays & Lifts		
Mizen Skysail Back Stays		
Fore & Main Skysail Back Stays	92	3
Fore & Main Topmast rig & Brace Pen	86	3¼
Fore & Main Lifts & Topsail Lifts	94	5½
Fore & Main T. Gall, Miz. Topsail & Cross Jack Lifts	112	5¼
Fore & Main Top Gal & Miz. Topmast Shrouds	49	4¼
	64	4

LANIARDS	Fath	Size
Fore & Main Shrouds & Topmast Back Stays	245	5
Mizen Shrouds & Topmast Back Stays	90	3¾
Top Gal Back Stays & Gib Guys	80	2¾
Fore & Main Royal & Mizzen Top Gal	90	2¼

FITTINGS	YARD GIER	
200 lbs. 18 th. ratline, 200 Do. 15 th.	100	3¾
100 Do. 12 th.	100	3
1200 lbs. Hambroline 75 Do. Marline	100	2½
175 lbs. 15 th. Seizing, 175 Do. 12 th.		
150 of 8 th, 150 of 6 th.	100	2¼
1200 lbs. 3 yarn Spunyarn, 500 Do. 2 yarn	100	2
450 lbs. filling suitable for lower rigging		
150 lbs. Do. Mizzen Shrouds Etc.		

The *Star of Hope* was a double topsail, three skysail-yard medium clipper. Her spars were somewhat longer and she carried more yards than the average ship of her tonnage, and as a consequence required more than the average amount of cordage. Reference to the draft shows that 7,725 fathoms were used in her running rigging, varying in size from 1 to 4½ inches, 2,056 fathoms in the standing rigging, ranging from 2½ to 10 inches in size, and 500 fathoms of yard gear, 2 to 3¾ inches in size.

This adds up to a total of 10,281 fathoms, or approximately 11.3 miles of cordage. The figure does not include fittings, ratline stuff, hambroline, seizings and the like, the quantities of which are given by weight and amount to 4,225 pounds. Nor does it include towing hawsers, line for studding sail and other essential lashings, flag halliards, extra preventer stays frequently used by hard driving captains, etc. It is obvious, therefore, that the vessel required more than twelve miles of cordage for a single set of rigging and working gear, in addition to nearly a third of a mile of chain for bowsprit stays and sheets and ties.

The *Hope* was a small ship with a medium rig. Her main truck was less than 145 feet above her deck. It is altogether probable that extreme clippers of the 2,000 ton *Challenge* class, whose masts were from 40 to 50 feet longer, and whose yards were correspondingly square, used at least fifteen miles of cordage, and possibly much more. The main truck of the *William P. Frye* and several other large Sewall ships, for instance, stood 210 feet above the light draft mark.

On the other hand a ship of the size of the *Hope*, but rigged with single topsails and carrying nothing above the royals would require less cordage. None of the drafts in the manuscript specify the various pieces of running rigging for such a vessel, but at the end of the book the following itemized list is given for a 1,200-ton, single topsail ship carrying royals only:

STUDG. SAIL GIER FOR A SHIP 1200 TONS

Topmast Stud. Hall, with a Whip	90	3¾ in
Tacks	104	3½
Lower Stud Hall, Whip	40	3½
Inner Hall	45	2½
Topmast & Lower Hall Whips	170	2¼
Top Gall Stud Tacks & Hall	300	2½ in
Tripping Lines T. G. Stud	90	1½
Topmast & Lower Stud Trip Lines & D. hauls	115	2½
Royal Stud Tacks & Hall	260	2 in
	1194	

RUNNING RIGGING

Topsail Brace Pen & Top Gall Runners	175	4 in
Fore & Main Braces & Topsail Hall	240	3¼
Topsail Buntlines, Clewlines, Reef tackles, Clewgarnetts, Inner Jib, Fore & Main Topmast Staysail, Miz Topsail & Spanker Halyards	860	3 in
Mizen Topsail Buntlines, Fore & Main Reef Tackles, Spanker Sheets, Mizzen Topsail and Cross Jack Braces, Fore & Main Top Gall Braces, Outer Jib Hall, Fore & Main Buntlines, Jib Sheets & Boat Falls	1100	2¾
Top Gall hall, Buntlines, Clewlines, Top Gall Staysail Hall, Cross Jack clewgarnetts & Topsail Lift Falls	840	2½
Fore & Main Royal Mizzen Top Gall clewlines, Braces & Buntlines, Fore & Main Leechlines, Down hauls Jibs & Staysails & Vang Falls	900	2½
Mizen Royal Braces, clewlines & Spencer Brails	700	2
Tacks & Sheets — 190 fath 4½	400	1½
Hawsers & Towlines to order	{ 200	1¼
	{ 200	1

Omitting the tow-line item, which was not included in the *Hope's* list, it will be noted that the above totals 6,599 fathoms as compared with 7,725 fathoms of running gear required by that vessel. The difference of 1,126 fathoms represents, roughly, the cordage needed to handle the ten additional sails carried by the *Hope*.

When we come to the lesser rigs carried by smaller vessels, the amount of cordage required drops rapidly, but less rapidly, perhaps, than one would expect. This was due to the fact that the smaller craft, especially schooners, carried relatively longer spars. The schooner *W. Freeman*, measuring 135 tons and 85 feet 8 inches over all, carried a mainmast measuring 102 feet from deck to truck. If the *Freeman's* rule were used in sparring 1,200-ton ships, it would have resulted in masts well over 200 feet in height. The double topsail bark *Asphodel*, carrying royals and measuring 488 tons, used 1,219½ fathoms standing, and 4,090 running rigging. The standing rigging of the hermaphrodite brig *Ocean Guide*, 282 tons, took 976 fathoms while her running gear required only 1,265 fathoms. The schooner *Martha Jane*, measuring 195 tons, but quite as lofty as the *Guide*, had 533 fathoms of cordage in her standing rigging, while her running gear totaled 1,060 fathoms.

To complete the list of material handled by ship-riggers, Deering & Yeaton have included the following:

LIST OF CHAINS FOR A SHIP OF 1000 TONS

	Ft.	Size
Jib Martingale	25	$\frac{11}{16}$
Back Guys	70	$\frac{5}{8}$
Flying Jib Martingale	36	$\frac{9}{16}$
Bowsprit Shrouds	152	$\frac{13}{16}$
Bob Stays & Slings for Yards	60	$1\frac{1}{8}$
Fore Topsail Tye	24	$\frac{3}{4}$
Fore Topgallant Tye	35	$\frac{1}{2}$
Fore Topsail Sheets Each	74	$\frac{11}{16}$
Fore Topgallant Sheets Each	75	$\frac{7}{16}$
Fore Topsail Tye Runner	56	$\frac{5}{8}$
Main Topsail Sheets Each	82	$\frac{11}{16}$
Main Topsail Tye	24	$\frac{3}{4}$
Main Topgallant Tye	36	$\frac{1}{2}$
Main Topgallant Tye Runner	58	$\frac{5}{8}$
Main Topgallant Sheets Each	83	$\frac{9}{16}$
Mizen Topsails Tye	17	$\frac{5}{8}$
Mizen Topsails Tye Runner	45	$\frac{9}{16}$
Mizen Topsails Sheets Each	67	$\frac{9}{16}$
Mizen Topgallant Tye	32	$\frac{3}{8}$
Slings For Gaff	18	$\frac{9}{16}$
Ring Stoppers	40	$\frac{11}{16}$
Shank Painters	40	$\frac{5}{8}$
Mizen Topgallant Sheets Each	67	$\frac{3}{8}$
Boats Guys		$\frac{3}{8}$

The total of the above, after doubling the given quantities where pairs are indicated, is 1,674 feet, which was to be cut up into forty or fifty separate pieces and fitted, the actual number depending on the sail plan of the ship. For a ship of 1,200 tons the total length would be somewhat greater, and in the big double topgallant ships of a later date, would exceed half a mile in length.

Wire rigging came into use very slowly in the United States. It was not until 1863 that Deering & Yeaton rigged a ship with iron. This was the *Daniel Marcy*. Her specifications were as follows:

MEMO. OF WIRE CORDAGE CAPT. MARCY'S SHIP

Fore Shrouds	88 $\frac{1}{2}$	4 $\frac{1}{4}$
Main Shrouds	96 $\frac{1}{2}$	4 $\frac{1}{4}$
Mizen "	59	3 $\frac{1}{2}$
Fore Topmast Back Stays	50 $\frac{1}{2}$	4 $\frac{1}{4}$
Main "	54	4 $\frac{1}{4}$
Mizen "	46	3 $\frac{1}{2}$

Fore Top Gall Back Stays	66	$2\frac{3}{4}$
Main "	69	$2\frac{3}{4}$
Mizen "	29	$2\frac{1}{4}$
Fore Royal Back Stays	$37\frac{1}{2}$	$2\frac{1}{4}$
Main "	39	$2\frac{1}{4}$
Mizen "	32	$1\frac{3}{4}$
Fore Topmast Shrouds	44	$2\frac{1}{2}$
Main "	44	$2\frac{1}{2}$
Mizen "	33	$2\frac{1}{4}$
Fore Top Gall Shrouds	19	2
Main "	19	2
Mizen "	16	$1\frac{3}{4}$
Inner Jib Guys	15	3
Outer "	20	$2\frac{3}{4}$
Fore Stays	28	$4\frac{1}{8}$
Main Stays	31	$4\frac{1}{8}$
Mizen Stays, Double	$22\frac{1}{2}$	3
Fore Topmast Stays	39	$4\frac{1}{8}$
Main Topmast "	41	$4\frac{1}{8}$
Mizen "	$12\frac{1}{2}$	3
Main Topmast Spring Stay	19	$3\frac{1}{4}$
Inner Jib Stay	25	3
Outer "	28	$2\frac{3}{4}$
Fore Top Gallant Stay	29	$2\frac{1}{2}$
Main "	14	$2\frac{1}{2}$
Mizen "	13	$2\frac{1}{2}$
Fore Royal Stay	$32\frac{1}{2}$	2
Main "	15	2
Mizen "	$11\frac{1}{2}$	$1\frac{1}{2}$
Lengtheners for Topsail Runners	15	3

Only one other vessel was rigged with wire by Deering—the bark *Niobe*, in 1867. As a matter of fact, hemp rigging continued in common use for many years thereafter. The last vessel so rigged by Captain White was the three-masted schooner *Laura M. Lunt*, built at Rockland, Maine, in 1890, by Gilchrist, for Captain Chan Peck, of Edgartown.

Making and fitting the rigging was only a part of the boss rigger's responsibility. All the standing rigging was cut and made in the rigging loft, after which each gang was coiled, stopped and tagged to be taken on board later and set up. The first step, therefore, involved a long series of careful and intricate measurements and calculations in which the length, diameter, rake and position of the masts, and the various dimensions of the hull had to be taken into consideration. Nor was this enough. Occasionally, through the builder's carelessness, or through the settling of shoring, a ship was out of line. One side might be several inches lower

or wider than the other, which would necessitate cutting the gangs on one side correspondingly longer or shorter than on the other. Then, if through miscalculation, or failure to detect such peculiarities of build, the rigging failed to fit, woe to the unfortunate boss rigger. He not only lost his labor, but had to supply new gangs at his own expense.

Such instances were rare, but they did occur. Captain Bill White had one narrow escape. He said:

I contracted to rig the 4-masted bald headed schooner *Charles E. Wilbur*, built at Mystic, Connecticut, in 1904, and was making out my draft, as usual, when I noted that McDonald (the builder) had shems under one side of the fore'd house. Jees, I says, guess I'd better look into this. So I begun to measure, and I found that abreast the forem'st, she was six inches wider on one side than the other. Then I made a straight edge and laid it across the rails and put the level to it, and one rail was six inches higher than the other. So I cut the rigging according and sent it up.

About that time Captain Davis, the owner, come aboard and he see the forem'st shrouds hanging short on one side, and he stopped and ses: 'Guess you made a mistake here, Bill.' 'Think so?' I says. 'Swing her, Captain.' So he took and swung her but she still looked short to him. And then a couple more come along, and *they* swung her. And while they was a talking and figgering I was in a jam, along comes McDonald and he takes a look, and he goes right up into the air. 'By —, Bill,' he says, 'You've spoiled that rigging and you've got to stand for a new gang.'

I didn't take no notice. I says to Captain Davis: 'Here's a rule. Now you measure from the mast to the rail on both sides.' And he did and made the difference same as I had, and he began to look pretty sour. 'Now,' I says, 'lay this straight edge across the rails and try her.' So he put the level on and see she was six inches high on one side.

Now, I says: 'Mac, I was going to stretch this rigging instead of my mouth, but you had to come along and make me talk. That rigging is going to fit as well as any job I ever done, even if you did build her lopsided.' And it did, and the only ones that wasn't pleased was McDonald and Capt. Davis, but it w'ant on account of the rigging.

The great majority of ships were of course built with a high degree of accuracy, but no careful rigger went on this assumption. The fact that few of the boss riggers failed to detect and make proper allowance for such mistakes speaks well for the ability and alertness of the men who rigged America's once great fleet of sail.

The old-time rigger took great pride in his work and was equally jealous of his reputation for honesty. As often as not, he worked under a mere verbal contract. When the agreement was reduced to writing, it consisted of a few sketchy lines, usually for the purpose of covering special requirements. Only one such written contract appears in the

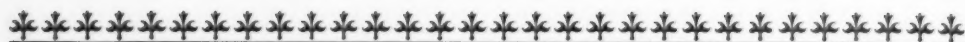
Deering & Yeaton book. When the ship *Simla* arrived at Portsmouth in May 1866, completely dismasted, Deering agreed to rerig her. The memorandum of the contract is recorded on page 134 of the manuscript, as follows:

A. K. P. Dearing [*sic*] Agrees to fit the Rigging & Rig Ship *Simla* according to original Draft, take out Stumps of Lower Masts place Spars which may be alongside in the water, Bend Sails, receive Lower Masts Fore & M. Yards at the place of manufacture Each & every other article to be Delivered within Reach of the Ships Tackles

for the sum of
Eight Hundred and Twelve Dollars
\$812.00

Few are left now of those who mastered the art of the hempen rig, and most of those have long been on the inactive list. To those who have seen the old-time rigger at work and watched the intricate knots and splices growing under his flying fingers, and listened to his talk of the thousand and one rule-of-thumb rules of the rigger, it seems a pity. He was a great specialist in his day. He was an even greater jack-of-all-trades.

NOTE. To facilitate consultation of the Deering and Yeaton record book, Count Sparre has agreed to allow the Editors to make microfilm copies of it for deposit at the Marine Historical Association, Inc., and at the Peabody Museum of Salem. It is hoped that these will be available in the near future.



Travel by Water, To, From, Between and Within the United States in 1800

BY PETER OLIVER

NOTHING is more clear, from an examination of travel in the United States in 1800 than that 'Time travels in divers paces with divers persons' as Rosalind said, and that in that year he travelled with a lazy foot.

Two vessels sailed from New York that year for Philadelphia and took 14 days for the passage. One from Boston to Philadelphia took 31 days and one to Baltimore from Bremen 164 days.

Yet in 1800, by the breath of uncontrollable winds upon sails, hope and imagination led our skill and courage as far forth in our little sloops and schooners, in our brigs and ships, as it has gone again, to the ports of all the oceans of all the world.

At home, the vessels engaged in the coastal trade were even more numerous, though the records are less easily discernible.

Small sloops and schooners maintained regular services. Fortnightly, weekly, and biweekly, packets sailed from Portland and Portsmouth to Boston and to ports further south. There were regular sailings from New Bedford, Newport, Providence and New London and New Haven to New York and Philadelphia and the Chesapeake.¹

There were regular services to and from ports that today we do not associate; the sloops *Independence*, *Julia*, and *Hope for Peace* plied between Albany and New Brunswick, New Jersey; nine vessels gave an almost daily service between New York and Newburg,² and there seem to have been regular sailings from Providence, via New York and Hudson, to Albany.³

There was a weekly sloop from Elizabeth-Town to New York,⁴ almost

¹ There were services between the southern ports, and from them, Savannah, Charleston and the North Carolina ports to the north.

² Two of these actually sailed from New Windsor, which was two miles above Newburg. Newburg, New York, *Rights of Man*, 8/18. Throughout the footnotes references to newspapers are given by month and day, the year being 1800 unless otherwise noted. Thus 8/18 = 18 August 1800.

³ *Providence Gazette*, 8/16, 10/4, 10/11.

⁴ [Elizabeth] *New Jersey Journal*, 1/14.

daily service between Bordentown and Philadelphia,⁵ a weekly schooner between Sag Harbor and New York,⁶ and a weekly 'market boat' from Saugatuck (and presumably every harbor in the Sound) to the city.⁷ The *Hawk* ran daily from Dover, New Hampshire, to Portsmouth;⁸ there was a 'constant packet' from Alexandria to Norfolk,⁹ another so called from Norwich to New York.¹⁰ Every fifth day the *Charlotte* left Wilmington for Philadelphia;¹¹ every fourth and seventh day returning.¹² There were services between the Chesapeake ports.¹³ And there was much more than the incomplete records show.

To Philadelphia alone came over 400 arrivals from coastal ports, 24 from Charleston (suggesting a fortnightly service), 38 from Boston, 55 from Richmond, and 79 from New York.¹⁴

However, the coastal trade, compared with that from abroad, was insignificant. From such sources as are available, for the most part marine lists in the newspapers, there is a record of almost four thousand arrivals in this country from foreign ports and there were presumably the same number of departures.¹⁵

It seems reasonable to assume that the total would be at least a thousand larger were not the figures lacking for Castine and Wiscasset, for all the Chesapeake ports, except Baltimore, and for all the North Carolina ports, particularly Edenton and New Bern, and Wilmington, which existed chiefly by shipping, and traded extensively with Bermuda and with the West Indies.

⁵ *Philadelphia Aurora*, 3/24.

⁶ Mrs. Lyman Beecher letter, 15 August to Harriet Foote. 'All our purchases in New York . . . by a small schooner that runs once a week.' Lyman Beecher, *Autobiography* (London, 1863).

⁷ Advertisement of R. Lillibridge 'House for sale at Norwalk,' *New York Mercantile Advertiser*, 3/8.

⁸ *Dover* [New Hampshire] *Sun*, 4/23, '12½ cents each way, produce 4¢ each bushel.'

⁹ *Alexandria* [Virginia] *Gazette*, 1/16.

¹⁰ [New London] *Connecticut Gazette*, 3/12.

¹¹ *Wilmington* [Delaware] *Mirror*, 2/28.

¹² By a curious accident we ran across a packet service from Charleston, South Carolina, across the harbor to Sullivan's Island in a notice in the *Georgetown* [South Carolina] *Gazette* for 9 July. It is contained as part of the complaint of one Levi Durand against John Dawson. 'One of his witnesses was absent. Where? At Sullivan's Island about an hour and a half sail from Charleston and packet boats constantly running.' The same paper on 16 April announces 'To be leased The Ferry at the Foot of St. James Street.'

¹³ *Baltimore* [Maryland] *Telegraphe*, 5/7.

¹⁴ It will be observed that several arrivals are listed from Currituck, Edenton, New Bern and Wilmington, and thirty-three from 'North Carolina,' which refers undoubtedly to these ports. There are no records of this North Carolina shipping for this year except such indirect ones as these, but these were important shipping centers, not only in the coastal but also in the foreign trade, particularly to the West Indies. Similarly the records of Richmond and Norfolk could not be found, the latter being believed to have been burned during the War between the States. Other records missing are those of Nantucket, and Castine and Wiscasset in Maine.

¹⁵ I have a list of 3,698 arrivals. See table on next page.

ARRIVALS FROM FOREIGN PORTS 1800

United States Port	GREAT BRITAIN					EUROPE					WEST INDIES					Canada	New Orleans and Florida	Total				
	England	Ireland	Scotland	Wales	Total	Russia	Scandinavia	Germany and Netherlands	French, Spanish, Portu- guese Atlantic Ports	Levant	Total	W. Africa and Isles	Far East	South America	Cuba				Jamaica	Other Isles	S. A. and C. A.	Total
Portland	12	1			13				1	1	2				6	9	29	6	50			65
Portsmouth	5				5	2		1	8		11	2		1		5	75	13	93	2		114
Salem	2	11	3		16	3	2	3	14	16	38		12		40	1	59	7	107	4	2	179
Boston	66	11	6		83	7	5	15	38	30	95	8	24		66	9	135	28	238	46		494
New Bedford	6	3			9				1		1		1			3	2		5	3		25
Newport	2				2	2	1	1	2	3	9		6W		18	4	22	1	45	3		61
Providence		1			1	1		2	2		5	1	3	1	12	3	21	2	38	3		52
New London	5				5				1		1				2	3	73	12	90			96
New Haven										2	2				79	89	59	23	59	1		62
New York	121	37	26	6	190		3	25	47	39	114	7	13				352		543	52	27	948
Wilmington, Del.	1	1			2										6	2	19		27	9	2	40
Philadelphia	48	4	3	1	56	3		24	33	14	74	9	24	8	74	35	175	17	301	21	16	511
Baltimore	39	1	1		41			40	12	10	62	4	8		76	13	170	7	266	2	6	389
Charleston	59	5	8		72			20	14	10	44	9			131	63	160	9	381	4	7F	517
Savannah	27	1	6		34				2		2				7	40	52	3	103		6F	144
					529						460	40	93	11					2356	150	69	3698

Note omission of Castine, Wiscasset, Maine; Norfolk, Richmond, Virginia; Newbern, Edenton, Georgetown, Wilmington, North Carolina.

The figures contain surprises. Philadelphia had for a long time led American shipping and while New York was known to be overtaking her, the extent of New York's growth was not realized.¹⁶

The total figures, however, are overwhelming. With 948 arrivals from foreign ports this year New York had almost twice as many as each of her nearest competitors, Charleston, Philadelphia, and Boston.

From Great Britain there were over 500 arrivals, almost 200 of them at New York, with Boston next with 83; from the continent and the ports of the Levant came 460, of which 114 went to New York with Boston again next with 95. From the sugar and coffee ports of the West Indies, whence came the greatest volume of our shipping, New York led with 543 arrivals, with Charleston next with 381, and Philadelphia third with 300.

The India and China trades and the whaling expeditions alone had not followed the trend. From the Far East, Boston and Philadelphia each had 24 arrivals, Salem and Baltimore had 12 and 8 respectively, New York 13. The whaling, then as later, was chiefly out of Nantucket and New Bedford.¹⁷

But the totals, though incomplete, give a picture that must be true. It is true that in the trade to the Far East other cities were ahead; in the West Africa trade and the trade to the islands between Africa and the new world, others led — Philadelphia and Charleston with 9 each, Boston with 8 and New York with only 7. South America also seems not to have tempted the New York merchant. Eight ships of the eleven discovered from South America came to Philadelphia.¹⁸

In addition to travel and commerce abroad and alongshore, the inland waterways were being developed and used.

In Hartford the Union Company was incorporated to clear the channel of the Connecticut River.¹⁹ Albany and Hudson were active ports. In Maryland, the Delaware and Chesapeake Canal venture had been incorporated in 1799; the Susquehanna Canal Company and the Potomac Company more than fifteen years before. Virginia in 1800 passed acts to improve the navigability of South River, the Potomac, Appomatox, Staunton, Monongolia [*sic*] and Black Water Rivers; North Carolina had

¹⁶ Robert G. Albion, *Square-Riggers on Schedule* (Princeton: Princeton University Press, 1938), p. 2. 'Not until 1797 had it [New York] finally reached first place in the volume of its foreign commerce and its lead was still so slight as to be most insecure. . . .'

¹⁷ *Whaling Masters* (New Bedford, 1938). This shows totals of Nantucket 12, New Bedford 9, Norwich 1 arriving and sailing during 1800.

¹⁸ To Portsmouth, Newport and Providence came one each.

¹⁹ Connecticut Acts & Resolves 1800. Charter granted October 1800; 1,600 shares at \$50 each. Tolls based on draft. Below Middletown rates ran from \$6.00 for 6-foot draft to \$38.00 for 10-foot draft. Stock was offered 1 January 1801 and subscribed that day.

for several years required six days work a year from all male inhabitants between fifteen and sixty living within six miles of certain of her rivers.²⁰

Strangest phenomenon of the use of inland waters was the building of ocean going vessels on the upper Ohio and Monongahela Rivers, over 1,000 miles from salt water, vessels which were to carry their cargoes of flour to New Orleans or the Atlantic seaboard, there to be sold into the overseas trades.²¹

Since the building of Boston Light in 1716 there had been aids to navigation. Now in 1800 there were twenty-five lighthouses from Cape Elizabeth to Tybee.²²

Improvements were constantly being made. At the January meeting of the Boston Marine Society the committee appointed to examine Mr. Cannington's improved lamps reported them favorably. Part of the committee went out on the revenue cutter to a point midway between Boston Light and the new state house, in the cupola of which Mr. Cannington's new lights were suspended, and reported that 'their power and clearness far exceeded the light from the Lighthouse.'²³

Returning shipmasters brought news to their local newspapers or Marine Societies of aids or perils to navigation on shores away from home. 'A dry shoal' off the northwest coast of New Holland in latitude 20° 29' S and longitude 123° 55' E was reported in New York²⁴ in a 'Notice to Mariners,' and the 6 January 1801 meeting of the Boston Marine Society

²⁰ *Acts of General Assembly of South Carolina* (Columbia, South Carolina, 1808). Act of 1791 for improving navigation on the Great Peedi, the Water, Congaree, Broad River, Savannah, Kowee, Tugaloo, and Black Rivers, Lynches, Black, Jeffries, and Catfish Creeks.

²¹ (A) *New York Spectator*, 8/16, quotes a letter from Marietta, 7/20: 'Ten rods from my house is building the Brig *Marietta* of 800 tons. She will take 800 bbls. of flour to the Atlantic next February or thereabouts.' (B) L. D. Baldwin, 'Ship building on the Western Waters, 1793-1867,' *Miss. Hist. Rev.*, XV, no. 1 (June 1933), describes building of the *Monongahela Farmer*. (C) *Alexandria* [Virginia] *Advt.*, 12/10. 'A number of gentlemen in Cincinnati Northwest Territory have formed themselves into an association under the appellation of the Commercial Company for the purpose of encouraging ship building.'

²² Lighthouses:

Cape Elizabeth, Portland
 Portsmouth, New Hampshire
 Plum Island (two lights and shelter for shipwrecked seamen)
 Thatcher Island (two lights)
 Boston Light (shelter for shipwrecked—cannon & gun for warning)
 Plymouth (two lights)
 Cape Cod ('Eclipser' revolving in 80 seconds with result 50 light, 30 dark, 50 light, etc.)
 Brandt Point Nantucket
 Gay Head
 Block Island
 Clark's Point, New Bedford
 Beavertail (Newport)

New London
 Eaton's Neck
 'Montock'
 Sandy Hook
 Cape Henlopen
 Cape Henry
 Cape Hatteras
 Bald Head
 Cape Fear
 Georgetown
 Charleston
 Morris Island
 Tybee

²³ N. Spooner, ed., *Gleanings from the Records of The Boston Marine Society, 1742-1842* (Boston 1879).

²⁴ *New York Spectator*, 11/5.

referred to a committee 'a communication from Captain Moses Barnard respecting a Rock which he had observed on his last voyage to India.'²⁵

All the important harbors were buoyed though without any apparent system of colors. Off Cape Elizabeth the *Coast Pilot* for 1800 says there was a red buoy on Broad Cove Rock, 'bearing NNE from the pitch of the cape,' a white one on Trundy's Reef in sixteen feet of water and a black one on Spring Point Ledge, which when up with it 'you open the town.'²⁶

Going into Nantucket harbor by the western channel, two white buoys were left to starboard, two blacks and a red to port,²⁷ and the entrance to Savannah harbor from Tybee was buoyed in the deepest part of the channel and the buoys could be passed on either hand.²⁸

Let there be no mistaking that commerce was the thing that year.²⁹

Political philosophers, like Callender and Cooper, with the tested approval of Mr. Jefferson, could write idyllically about the beauties of the agricultural state and the evils of commerce, but here in the foreign trade it was, that the five dollar venture of the Salem school-boy or girl with his or her older brother captain of his own ship (perhaps to the fabulous East) became ten dollars.³⁰ Here one beheld man's dearest picture, of his money — be it pounds or pence, pennies, or dollars by the keg³¹ or by the thousands — doubling and redoubling.

Here were the days when courage and diligence were the discipline of the order. The Industrial Revolution was coming, with Labor as its problem child, but few knew it, and the trade, fair and free (though not too fair and not too free) was the be-all and the end-all.

Here was the way to get rich, almost easy, if you had a little money, by no means impossible if you had none. 'A friend in need is a friend indeed'

²⁵ *Gleanings from the Records of The Boston Marine Society.*

²⁶ Captain Lawrence Furlong, *The American Coast Pilot* (3rd ed., Newburyport: Edmund M. Blunt, 1800).

²⁷ My copy of the *Coast Pilot*, which belonged to one George Williams, has a note by him in the back 'Nantucket Light is laid down wrong; look in the Directions and see the course[?] to go in under the Light to Anker. If you don't believe it you may go and see yourself.'

²⁸ New buoys were put out in the year that are not listed in the *Coast Pilot*, for example 'an iron spear with a white vane at the top' on Lattimer's Rock in Fisher's Island Sound. *New York Spectator*, 10/18.

²⁹ Although young Charles Harris, lawyer of Halifax, North Carolina, writing his brother Robert at Salisbury about the choices of profession could say 'farming is more stable, the merchant must risk all' and assure him that the greatest fortunes in this country would be made by farming and planting, nevertheless in that year 1800, despite the depredations of French and British, the pirates of the Barbary Coast and the West Indies, commerce it was, and the shipping trade, that offered the shining reward to tempt ambitious hearts.

³⁰ 'The stick the school boy whittled shaped itself into a hull, a rudder, bowsprit or a boom . . . in school . . . his sketches took form in yards and shrouds and bob-stays. Give him a box of water colors and the private signals of the East India merchants were its earliest products.' Ralph D. Paine, *Ships and Sailors of Old Salem*, p. 421.

³¹ Four kegs . . . 24,000 hard Spanish mill dollars' . . . sent to Batavia, 1/1 1800. *Naval Documents relating to the Quasi War with France* (Washington 1938), V, 8.

headed an advertisement of A. Cohen in Philadelphia offering to accommodate clients 'with any sum of money from Five Dollars to Ten Thousand and upwards,' of course, 'on the most reasonable terms.'³² One 'JL' of Baltimore, addressing himself 'To monied men' offered an excellent opportunity 'to anyone having money, and wishing to put it out at a good interest in a safe manner.'³³ Owners sailed their own ships, captains bought shares, builders built, then sailed, young men went out as juniors and came back as owners to retire to Salem or Newburyport still in their twenties, having made their fortunes.³⁴ It was, moreover, a decent business (except the slave trade) and the high profits were not held in disesteem.

And everyone was in it. When Captain Breck brought the *Dispatch* into Boston that July, 170 days from Canton, it was perhaps not a notably fast passage, but it was the end of that ship's third circumnavigation of the globe.³⁵ 'You may take an adventure with you on your own account in the *George Washington*,' wrote the Secretary of the Navy to Captain Bainbridge bound to Algiers with our tribute to the pirates.³⁶ 'Frederick and I,' wrote John Henry Tudor, six months out of Harvard, in his diary, 'are shipping an adventure of furniture of about \$500.00 to Havana.' In New Haven, Simeon Baldwin cast up his accounts, making inventory of everything he owned 1 January 1801. On the list was 'my share in the ship *Hope*, \$375.00.' An anonymous young gentleman in 'An advertisement to Merchants' in the 25 July *Baltimore Telegraphe* describing himself as one 'who wishes to go to the West Indies or up the Straits as a super-cargo,' offers his services. 'He would wish to have a part of the cargo on his own risk.' The newspapers were full of this international trade, reporting to their anxious readers 'Prices Current at Nantes' and at London and Liverpool and Havana. They announced in the front pages the loading of ships for Madeira, Greenoch, Hamburg, and New Orleans, for Limerick, for the Mediterranean, the West Indies, the South Seas, and the Indian Ocean. They advertised for sale the cargoes that had just come in: the hides from Buenos Aires; pipes of Holland gin; the casks of Malaga and Madeira wine; duck from St. Petersburg; woolens and Yorkshire cloth

³² [Philadelphia] *Claypooles American Daily Advertiser*, 7/29.

³³ *Baltimore* [Maryland] *Telegraphe*.

³⁴ Zachariah Fowle Silsbee of Salem made his first voyage in 1800 as clerk to his brother Nathaniel, in the *Herald* bound for Madeira, Madras, and Calcutta. He got back to Boston in February 1801. In 1803, aged nineteen and one-half years, he was captain of the *Herald* and took her to Batavia. He retired at the age of twenty-eight.

³⁵ *New Bedford* [Massachusetts] *Columbia Courier*, 7/25.

³⁶ *Naval Documents Relating to the United States Wars with the Barbary Pirates* (Washington, 1939), I.

³⁷ Papers of John Henry Tudor. MSS. Harvard College Archives.

from England; sugar and logwood; molasses and coffee from the West Indies; sherry from Cadiz, Cadiz brandy, and Bordeaux brandy, and Barcelona brandy, high flavored and fourth proof; Tobago rum, Castile soap, Honduras mahogany. From India and China came the teas—the Hyson and the Sookong, the Bohea, Tonkay, Congo, Singlo and Imperial; Florence oil from Italy, with Italian checked and striped silks; cutlery from London; the best New Orleans indigo; calico and muslins from Calcutta; pepper and the other spices from Java and Sumatra; and more silks and nankeens from China; St. Ubes salt from Portugal; ivory, 'black ivory' and gold dust from Africa; dry goods and German redemptioners from Hamburg, and Irish linens and the Irish themselves, like locusts, from Ireland.

We were at war with France; daily our ships were being seized on the high seas, another peril added to the great enough ones of wind and water. But the trade went on and we built a fleet to protect it. We had no navy in 1797, but in 1800 we had fourteen vessels, among which were names that Americans will never forget, *Chesapeake*, *Essex*, *Constellation*, and *Constitution*, and we were planning to build six 74-gun ships of the line. The pirates of Tunis, Algiers, and Tripoli plundered our Mediterranean trade and we paid them tribute for their empty promises of peace—anything that the trade might go on—tribute of good American dollars, Spanish milled dollars and gold; tribute of gold watches and swords with gold and jeweled hilts; tribute of naval supplies, of lumber, of live oak cut to specifications, or masts and yards and sails and oars; tribute of fully equipped ships armed with American cannon and munitioned with American powder and American shot (to be used by the pirates against American commerce).³⁸

Our fleet was small but not so small that we could not send two frigates, the *Congress* and the *Essex* to Batavia. While the *Congress* was dismasted 12 January³⁹ 6 days out of Newport, the *Essex* got there to convoy thirteen American sail out of those dangerous waters.⁴⁰

³⁸ *Naval Documents relating to United States Wars with the Barbary Powers* (Washington, 1939-1940), I-II.

³⁹ *Boston* [Massachusetts] *Columbian Centinel*, 7/21, also *Naval Documents relating to the Quasi War between the United States and France*, V, had a poem on this disaster about the two captains:

'Preble will see the decks are clear
When he the sans culottes would maul;
But Sever, to have room to dance
Has clear'd the decks of masts and all'

'Fun is fun,' the newspaper remarked 'but captizing the plank of an officer's reputation is no fun at all.' The poem, however, proceeded this smug remark.

⁴⁰ 'I cruised in the entrance of the Straits of Sunda for a fortnight, in which time I boarded 13 sail of American merchant ships richly loaded, the whole of which must have been captured, had a single French privateer of 16 guns been cruising in my stead. . . . ' *Naval Documents relating to the Quasi War between the United State and France*, VI, 224.

One of the reasons that the trade grew was the more or less simple structure of it. The average person today, though he might know that a shipment of flour or anything else for that matter, could be sold in some foreign market, would have not the faintest idea how to go about it, even if he had the money for such an investment. It was easier then.⁴¹ The correspondence between Fisher Ames of Massachusetts and his friend, William Grey, a leading Salem merchant, is illuminating. From 1794 for about ten years, Ames invested regularly small and large amounts with Grey, making from eleven to one hundred and thirty per cent⁴² on his investments. In 1789 he sent out \$5,000.00 in Grey's ship, the *Elizabeth*, to Canton. With the money they bought 95 chests of Bohea tea, 45 chests of fine teas, 2,500 pieces of nankeens and 6 cases of lustrings, satin, and china. After all charges were deducted, including Grey's commission of one-third(!) Ames got \$9,874.78.

The fact that the world was much less well known offered other possibilities for profit. The pepper trade of the East Indies tempted many of the sailor merchants to buy or trade in pepper; but Captain Carnes of the ship *Rajah* bettered the method. When he returned to Salem in 1800, on one of his trips, he had found a place where the pepper grew wild and he brought back three cargoes before the other Salem importers discovered his source of supply. On the voyage that ended in December 1800 he entered 147,776 pounds of the valuable spice.

This foreign trade, of course, meant not only employment of many people on the ships, but many more in the building and outfitting. New England built ships almost everywhere where there was water enough to

⁴¹ *New York Commercial Advertiser*, 12/30.

To the Editor of the *Commercial Advertiser*.

Sir, As the consequences of selling too low may be as bad as purchasing too high, I must beg the favor of you to insert the following statement in answer to one signed 'Caution,' on the subject of flour shipments to England. I will not assert that it was his intention to make an erroneous statement to answer some private end, I only say that it is one, and as such ought to be contradicted. I will, like him suppose the first cost of a barrel of flour to be

	dols. 12.00
The shipping charges are no more than	8
Freight, the highest	3
Insurance, 5 per cent	0.61
	15.69

Suppose it to bring only
Commission $2\frac{1}{2}$ per cent, &c, say

75s sterling	
2 do	
73s is	16.21

According to his statement, it must bring
sterling to pay costs and charges

33s 3d

dec 30

AN OLD SHIPPER.

⁴² S. E. Morison, 'Indian Ventures of Fisher Ames — 1794-1804,' *American Antiquarian Society*, XXXVII, new series.

float them. The Reverend Mr. Bentley going through Danvers on 8 May mentions a 400-ton ship of Mr. Grey's being launched at New Mills. A few days later he mentions two more being launched in Salem. Timothy Dwight, passing through New Bedford on 23 September, put down in his journal that there were 15,000 tons of shipping owned there. In New York, Eckford & Beebe's yard and Christian Bergh's at Corlears Hook, were building for John Jacob Astor. The *Philadelphia Directory* for 1800 shows 12 boat builders, 37 shipwrights, 23 ship carpenters, 12 ship chandlers, 20 riggers, 43 sail-makers, 2 carvers, 2 painters and 2 caulkers. But it was New England where the building was really great,⁴³ and leading New England was the district of Maine. In 1800 there were launchings at Brewer, Brookville, Bucksport, Castine, Deer Isle, Hampden, Penobscot, Brooklyn, Stockton, Wintersport. At little Bath alone eight vessels were launched that year, *one* the ship *Charles* of 400 tons.⁴⁴ On the Merrimac there were ten launchings,⁴⁵ on Plymouth County's North River⁴⁶ there were twenty-two.

Small wonder New England cherished her trade, carried in her own white winged ships through all the oceans of the world.

It seems obvious that our middle class, our merchants and shopkeepers, their clerks and apprentices, and where they had them, their servants, beheld a wider horizon than those of their class in recent years; up to that yesterday, so to speak, when Guadalcanal and Amboina, Tamatave, and the Danakil have become as familiar to most of us as they are, to the people of the Pacific Islands, of Madagascar, of Eritrea.

Here, in 1800 the silks and teas of China, the shawls of Cashmir, the wines of the Mediterranean countries, and the spices of the East were known by their peculiar and particular qualities to every housewife; and little school-boys of New Bedford, or Plymouth, or Newbury learned from fathers or brothers or uncles the habits of the islanders of the Pacific Archipelagoes.⁴⁷

But if the scene beheld was wider, than often since it has been, the tempo of life was retarded — for the flying clippers had not come, were

⁴³ In the ports of Massachusetts (including Maine) and New Hampshire alone, I have recorded eighty-eight launchings, including *none* from Nantucket, the Vineyard, Buzzard's Bay or the Taunton River, and the total is doubtless substantially greater.

⁴⁴ George S. Wasson and Lincoln Colcord, *Sailing Days on the Penobscot* (Salem, 1932); *Illustrated Historical Souvenir of Bath, Maine* (Bath, 1899).

⁴⁵ T. J. Currier, *Historical sketch of shipbuilding in the Merrimac River* (Newburyport, 1827).

⁴⁶ L. Vernon Briggs, *History of Shipbuilding, Plymouth County, Mass.* (Boston, 1889).

⁴⁷ A few years later my own great-grandfather, Thomas Marston Beare, was born at sea (29 March 1806) off the SE coast of Madagascar. One of his brothers was born in Hamburg in 1794, a sister and another brother on the Isle of France in the Indian Ocean, two other sisters in New York, which the family considered their home.

not yet to come for three decades, and except for a few smart passages alongshore (and these probably in fore-and-aft rigged vessels), the voyages were slow.

The table of coastwise arrivals in Philadelphia show nine passages from Baltimore in 3 days⁴⁸ and from Norfolk and New York in 2 days,⁴⁹ which are credible, but on 23 January the *Lark*, and on 28 November, the *President*, arrived at Philadelphia from New York, having been at sea two weeks! The fastest voyages between coast ports were those of the schooner *Deborah*, Captain Starr, New York to New London in 12 hours on 9 August, the schooner *Sarah*, Captain Smith, which arrived in Charleston on 28 March, 96 hours out of New York, and the brig *William*, Captain McDonald, Boston to Portland in 10 hours.⁵⁰

ARRIVALS IN PHILADELPHIA FROM U. S. PORTS IN 1800
(from *The Aurora* and *The Gazette of the United States*)

Port	No. of Arrivals	Fastest	Slowest	Average	Cargo
Alexandria	6	8	10	9	flour, tobacco, salt, iron
Baltimore	15	3	16	10	sugar, oil, soap, vinegar
Barnstable	1			14	plaster of Paris
Boston	38	7	31	13	wine, salt, beef, barley, fish, oil, hops, rum
Charleston	24	5	25	9	coffee, rice, sugar, cotton
Cushing	1			8	
Currituck	1			15	naval stores
Dighton	1			6	barley
Edenton	5	6	10	8	nav. st., tar, turp., tob.
Fredericksburg	5	5	14	11	tob., flour, fur, wheat, corn
Georgetown	5	5	10	7	rice, tobacco
Hartford	2	28			continental stores [<i>sic</i>]
Middletown	1				cheese and onions
Nantucket	11	7	16	9	oil, fish
Newbern	2	9	10	10	nav. stores — rum
Newburyport	2			6(1)	cheese, cider
New Haven	1	11			cheese
New London	5	4	7	5	cheese, fish
New Bedford	10	5	12	9	fish, oil, pl. of P., salt
Newport	12	4	14	8	cheese, sugar, coffee, beef, pork, rum, molasses, barley

⁴⁸ Schooner *Orange*, 5/6.

⁴⁹ Arr. 8/11 'Slp. *Priscilla*, Tunnel, Norfolk 2 days, lumber.' The *Fanny Bridges* made two trips in 3 days, 3/10 and 9/18, but on 11/13 she arrived after a passage of 8 days. 'Sch. *Eliza*, Myers, New York, 2 days.' 'Sch. *Fanny Bridges*, Dunn, New York, 2 days.'

⁵⁰ Portland [Maine] *Eastern Herald*, 8/28.

TRAVEL BY WATER IN 1800

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Port	No. of Arrivals	Fastest	Slowest	Average	Cargo
New York	79	2	14	6	pl. of P., wine, gin, deerskins, hdwre., mdse., salt, dry goods, oil, candles, molasses, staves, dyewood, bale goods, brandy, lime, provisions, crates, wheat, mahogany
North Carolina	33	5	17	8	nav. stores, wheat, fish, tob., lumber
Norfolk	45	2	18	6	lumber, salt, coal, tob., hides, sugar, rum
Passamaquoddy	8	10	20	15	plaster of Paris
Petersburg	1	3			
Plymouth	1	3		2	wines ⁵³
Portland	5	7	20	13	fish, spars, salt
Portsmouth	8	10	20	13	fish, oil, mol., rum, sundries
Richmond	55	3	23	11	coal, tob., flour, ginseng
Salem	3	12	31	18	wine, prov., beef, pork
Savannah	17	4	24	12	cotton, rice, tobacco
Snowhill	2	5			corn, flaxseed
Stonington	1	8			cheese, fish
"Virginia"	4	4	10	7	cork, wheat
Wilmington, N. C.	2	6	10	8	

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PHILADELPHIA FOREIGN ARRIVALS

(from *The Aurora* and *The Gazette of the United States*)

Africa, Coast of	1	85			ivory, gold dust, dyewood
Algiers	1	71 or 45 (1)			
Amsterdam	8	44	77	52	dry goods, bricks, gin, mdse.
Antigua	7	22	33	31	rum, fruit
Archangel	1	(via Norfolk)			
Barbados	1	28			
Batavia	11	105	166		sugar, coffee, pepper, dyewood
Belfast	1				160 passengers
Bengal	2	105	166		
Bermuda	8	10	29	15	sugar, fruit
Beverly	1				
Bordeaux	1	47			
Bremen	5	52	84	64	wines, dry goods
Bristol	2	49			mdse.
Cadiz	3	40	56	48	ballast ⁵⁴

⁵³ This is the schooner *Rosebud*, Captain Davies, which arrived 17 October. There is probably a misprint.

⁵⁴ *Philadelphia Aurora*, 7/18, 'U. S. Brig *Sophia* . . . 71 days'; 8/2, 'U. S. Brig *Sophia* via the Fort 45 days.'

TRAVEL BY WATER IN 1800

Port	No. of Arrivals	Fastest	Slowest	Average	Cargo
Calcutta	7	119	150	136	India goods, rice, Hyson tea
Camden	1	9			
Canton	4	120	144	132	black lute-strings, satins, tea, Nankeens, Cassia ⁵⁵
Cape Francois	43	10	44	23	coffee, sugar, cocoa, logwood, cotton
Cartagena	1	35			
Coruna	1	10			wines, cocoa, hides
Cumana	2	19	30	25	cocoa, cotton
Curacoa	5	25	40	31	cocoa
Dublin	2	35	82	58	dry goods
Exuma	1				salt
Gigoa	1	54			wine, dry goods
Gibraltar	1				
Gonaive	13	14	43	24	coffee, sugar, cotton
Greenock	1	48			mdse.
Halifax	8	12	25	17	fish ⁵⁶
Hamburg	11	45	85	59	dry goods, mdse., brandy
Havanna	67	12	55	19	sugar, molasses, cigars, fruit, honey, dyewood
Hispaniola	1				
Honduras (also Omoa)	6	14	36	27	logwood, mahog., sugar, in- digo
Hull	3	57	116	86	11/13 Brig Dispatch listed at '16' days
Isle of May	2	42	45	43	salt
Jacquemal	1	25			coffee
Jamaica	35	11	44	29	sugar, rum, coffee, indigo, fruit
La Guaira	4	20	31	27	
Leghorn	7	48	94	71	soap, marble, wine, oil, brim- stone
Liverpool	32	30	105	60	dry goods, salt, coal, crates
Liverpool, N. S.	2	15	17	16	
Lisbon	11	40	88	56	wine, salt
London	10	34	70	47	dry goods
Londonderry	1	87			248 passengers
Lunenberg, N. S.	1	8			
Madeira	4	37	57	49	wines
Madras	1	166			dry goods, sugar
Malaga	5	50	66	55	wine, fruit
Mariel	1	20			

⁵⁵ All arrived in April.⁵⁶ Two vessels arriving 13 October and 3 December were reported bringing coffee and sugars respectively.

TRAVEL BY WATER IN 1800

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Port	No. of Arrivals	Fastest	Slowest	Average	Cargo
Martinique	4	18	25	22	molasses, fruit
Montevideo	1	60			
Nassau	10	12	26	18	coffee, molasses, wine, fruit, lig. vit., mahogany, steel, gin, quicksilver
New Orleans	16	13	34	27	provisions, crates, tobacco, cot- ton, logwood ⁵⁷
Omoa	1				included in Honduras
Opporto	1				
Rio de la Plata	6	64	85	73	hides, tallow, horns, copper
Portsmouth, Eng.	1	79			
Porto Rico	5	18	44	29	dyewoods, coffee
Port Republican	24	16	40	26	sugar, coffee, logwood
Rio de Janeiro	1	56			sugar
St. Andrews, N. S.	6	9	25	17	plaster of Paris
St. Augustine	1	18			red cedar
St. Bartholomews	3	20	53	33	sugar, salt
St. Croix	7	18	33	24	rum, sugar
St. Helena	1				included in Batavia
St. Johns, N. B.	2	19			
St. Jago de Cuba	6	24	33	27	sugar, coffee, cigars
St. Kitts	13	22	31	27	rum, hides, salt, molasses
St. Marys, N. S.	3	14	18	16	ship timber
St. Petersburg, Russia	1	86			'First ship from there in many months . . . Americans are treated with respect there'
St. Thomas	14	6	24	17	sugar, ballast (schooner <i>Ven- ner</i> , Captain Crosby, arrived in 6 days on 21 July)
St. Ubes (Setubal)	7	38	59	46	salt, wine
St. Vincents	1				
Suffolk	2	6			shingles
Surinam	3	43	53	48	sugar, molasses
South America	1				sugar, coffee
Swansea, Wales	1	52			crates
St. Sebastian	8	42	89	57	not including brig <i>John</i> , ar- rived 5/1 in 9 days, wine, brandy, oil
Teneriffe	3	13			wines
Tobago	2	22			rum
Tortola	2	16			copper
Trinidad	2	28	31	29	sugar, coffee
Turks Isl.	6	15	28	22	salt, coffee, limes
Whaling Trips	1	2 years			2,000 bbls.
Windsor, N. S.	1	12			

⁵⁷ Not included is 'sloop *Regulator*, Bayley, New Orleans 8 days, salt and raisins' as it is surely an error.

The slow passages like that of the *Priscilla* which arrived in Philadelphia on 27 October 18 days from Norfolk, and the sloop *Mary*, which reached the same port 8 December, having left Boston 31 days before, are more remarkable.

From abroad of course the times were longer. Westbound from the British Isles, the voyage nearly always took a month and usually longer.⁵⁸ As in the case of the coastwise shipping, the Philadelphia records are the most complete, and the volume of shipping to that port is sufficient to justify generalization from them on times of passage of all our shipping that year.

From Hamburg and Bremen ten trips averaged 64 days, from the Far East an average of eighteen voyages was 138 days; on over a hundred sailings from Cuba and the Haitien ports the average varied only for from 19 to 25 days.

The slowest westbound passage encountered during the year was that of the brig *Frau Regina*, which arrived in Baltimore 11 April after a trip from Bremen which lasted 164 days.

Eastbound passages to Europe because of the prevailing westerlies were generally faster, though it is difficult to find many figures. One of the fastest eastbound trips was that of the schooner *Juno*, Captain Fairchild, which cleared from New Haven 9 January and arrived in Spain 26 days later.

Speed now has come and come with a vengeance. Steam in the nineteenth century cut most of the old schedules in half. The development of the internal combustion engine in the twentieth century has reduced by nine-tenths the records of steam.

The effects of these changes in the time of life required for specific purposes has not yet been clearly appraised. The most drastic changes, those of the last few years, have not yet been used by free men in the pursuit of happiness but only by governments attempting to secure their own survival.

⁵⁸ The fastest passages discovered were two, of 28 days, from Liverpool to Portland, the ship *Nabby*, Captain Crandall, which arrived 5 November and the brig *Martha*, three days later; the best round trip to England that of the brig *Canton*, Captain Terry, which arrived at New Bedford 16 October in 42 days, having, according to the *Columbian Centinel* 'performed her trip in 95 days.'

The *Salem Gazette* announced on 16 May arrival of the ship *Friendship*, Williams, from Cadiz in 26 days, having made a round trip of 87 days and an outward passage of 18.

The brig *Halcyon*, Captain Gale, which arrived at Portland 19 January, took 11 days from Lands End to the Grand Bank, 19 more to Portland and 5 more to Boston, where one newspaper commented 'This is a fast sailing ship.'

There are a few other examples of fast, or fairly fast short runs. The American letter of marque *Samuel Smith* of Baltimore pursuing a French privateer chased her 240 miles in 28 hours. The last six hours she averaged 11½ knots.

The log of the ship *Adventure* which weighed anchor 16 June at Salem bound to Copenhagen,

But in 1800 the very changes had not come. It might then take five months or less than one to cross the Atlantic. The sail from New York to Philadelphia might take two days or two weeks. And over all hung danger, danger on hand from hostile Indians and wild beasts, or danger just of getting lost, danger at sea of piracy, of capture by the French, and infinitely more terrible, the danger of wind and weather.

The dangers of travel in 1800 a few years ago to most of us would have been incredible. War having again imposed the ancient pattern in the world, by which danger or death go passenger in every voyage, these dangers and privations of 1800 have a familiar ring to us now at least by hearsay.

Danger today in travel is made of the dissensions between us men. In 1800 it seemed much more to be God's particular visitation. During the century and a half between us, Diligence, Avarice and Ingenuity eliminated the dangers of weather and of wind, of deep and fast waters and the upper reaches of the air. Today we can brave the natural catastrophe of 1800. Flood and storm have rarely terror for us.

Nevertheless it is probably more dangerous today to cross the Atlantic and Pacific Oceans, or to coast along from Tybee shoal to Portland Head than it was in the winter of one hundred and forty-three years ago. The philosophers may explain, what it is hard to prove. At least, we observe that up to now the Age of Reason would seem almost to have needed a better guide.

There was the little, almost individual accident, such as befell the ship *Lucinda*, tossed on her beam-ends, which threw the captain out of his berth on his head, from which blow 'he expired in 15 minutes.'⁵⁹ There was the Portland ship struck by lightning, which badly hurt the second mate and one man, so that 'their lives are despaired of';⁶⁰ there was William Stevenson, who fell from the main topmast of the U. S. S. *Trumbull* and dashed his brains out,⁶¹ and the sailor on the U. S. S. *Boston* killed 'through his own folly.'⁶² These were small occurrences.

But Nature painted with a larger brush. When the brig *Mary* foundered at Saint Michaels, all on board perished 'except Captain Dixon fortunately ashore.'⁶³ Not for nothing were vessels given such names as

and after leaving which port she headed for the Far East had daily runs between Copenhagen and the Cape of Good Hope that ranged from 7 miles on 30 May to 261 on 31 August. (Peabody Museum log.)

⁵⁹ *New Bedford* [Massachusetts] *Columbian Courier*, 3/21.

⁶⁰ [Portland, Maine] *Jenks Portland Gazette*, 2/10.

⁶¹ *New London* [Connecticut] *Courier*, 2/11.

⁶² The *Boston* was, in 1800, actively engaged in the quasi-war with France.

⁶³ [Philadelphia] *Gazette of the United States*, 7/25.

Hopestill.⁶⁴ When the schooner *Industry* foundered off Hatteras, all were lost except two who swam ashore.⁶⁵ Of much of the tragedy there is almost no record. When the ship *Charlotte*, Captain Fitch, 89 days out of Liverpool arrived in New London, she reported having seen in latitude 38°, longitude 32°, 'a wreck of about 130 tons, mostly under water, no mast standing. The wreck appeared to be a high decked vessel. She had no anchors and no rigging.'

The ship *Maria*, a whaler arriving in New Bedford 21 March reported landing in Cocos Island, latitude 3° 54' N, longitude 34° 10' W, and finding there 'a part of a ship and four anchors.'⁶⁶

The schooner *Three Friends*, from Passamaquoddy to Wilmington in September was totally lost.⁶⁷ The record is infinitely long; dismasted off Hatteras,⁶⁸ dismasted off Cape Henry,⁶⁹ dismasted in a gale,⁷⁰ wrecked off Tybee,⁷¹ ran ashore near lighthouse and bilged,⁷² lost a few miles south of Cape Henry,⁷³ 'struck on the breakers, soon after filled,'⁷⁵ 'cast away in a heavy gale on Cunituck Beach,'⁷⁶ 'foundered at sea, 9 at night on March 20th, sprang a leak and sank in 20 minutes.'⁷⁷ And if the shipping notices did not carry daily records of arrivals in distress, as at certain times of the year they almost did,⁷⁸ still nearly every vessel coming safely to port brought some story of danger or of terror, of some wreck seen, perhaps boarded and identified, perhaps of only an unidentifiable upturned keel.

The brig *Favorite* from Balboa to Salem brought a letter to Captain Endicott saying that on 7 November he picked up the schooner *Minerva*

⁶⁴ [Philadelphia] *Gazette of the United States*, 10/15.

⁶⁵ *Boston* [Massachusetts] *Columbian Centinel*, 6/26.

⁶⁶ *New Bedford* [Massachusetts] *Columbian Courier*, 3/21.

⁶⁷ *Wilmington* [Delaware] *Gazette*, 10/1.

⁶⁸ *New Bedford* [Massachusetts] *Columbian Courier*, 1/10, schooner *Hannah*.

⁶⁹ *New York*, 2/24, schooner *Dasher*.

⁷⁰ *New York*, 9/29, schooner *Enterprise*.

⁷¹ *Savannah*, 2/13, schooner *Eliza*.

⁷² *Savannah*, 2/13, schooner *Brothers*.

⁷³ [Philadelphia] *Gazette of the United States*, 4/7, ship *Laurana*.

⁷⁵ *Charleston* [South Carolina] *City Gazette*, 2/4, sloop *Betsy*.

⁷⁶ *Charleston* [South Carolina] *City Gazette*, 2/21, sloop *Little Sam*.

⁷⁷ [Newburyport, Massachusetts] *Political Gazette*, 6/6, ship *Alliance*.

London to New York, schooner *Captain Benjamin Wheeler* of Newfoundland — feared lost. Sailed New York 40 days later. No word at New Providence, his destination. *Litchfield Co. Farmers Monitor*, 3/12.

⁷⁸ For example — *Charleston*, South Carolina, 'arrivals in distress':

1/7 schooner *Harmony*, Prince, Havanna, 9 days, bound for Boston.

1/8 brig *Dolphin*, Gardner, Havanna, 10 days, bound for Boston.

1/18 brig *Conception*, Mortera, 27 days, bound for Nassau.

1/24 sloop *Three Sisters*, Reynolds, St. Thomas, 27 days, bound for Savannah.

1/28 schooner *Susannah*, Dennison, Martinique, 40 days, bound for Boston.

2/4 ship *Amiable*, Tillinghast, Hamburg, 92 days, bound for Philadelphia.

2/4 schooner *Resolution*, Row, Halifax, 63 days, bound for Philadelphia.

full of water, all hands lost in the hurricane of 3 November except Michael Quin, the mate, who had not eaten in four days.⁷⁹ The schooner *Friendship* from Santiago to Charleston also in November brought word of the schooner *Experiment* of Boston '... no one aboard, unable to board her.'⁸⁰ Captain Worthington bound for New London to St. Vincent in latitude 34° N, longitude 68° W, saw the wreck of the pilot-boat-built schooner *Eagle* of Baltimore, her foremast was ripped, hanging over the top rail. 'There was so nauseous[sic] a smell issuing from the vessel that no one could venture on board her. It is supposed that part of the crew must have died on board.'⁸¹

Even without shipwreck there was frequently privation. When the ship *George and Harriet* arrived in New York on 6 April, 115 days out of Liverpool, bound for Boston for the last eighteen days the crew had been reduced to one half a biscuit a man and for the last five days had had only water to drink.⁸²

When the brig *John* sailed from Lisbon 10 August for Philadelphia, while no one expected the specific terror that lay ahead of them, everyone knew the more than possibility of disaster. On 15 August they fell in with the ship *Orion*, Captain Bunker, of and for New York from St. Ubes having on board a Mr. Gibson, wife and two children as passengers and the vessel laden with salt. Captain Bunker informed Captain Atkins of the *John* that the *Orion* had started a leak and the leak had increased very fast. Shortly after this all hands left the *Orion* and went on board a brig bound for Newburyport which stood by.

Nothing material, so runs the account, occurred till 15 September, when laying to under a double-reefed mainsail, using the reefed mainstaysail the wind blowing very hard from the SSW and a heavy sea running, a most tremendous sea struck the *John*, and immediately separated her. After recovering himself, Captain Atkins found he was on part of the main deck having about twenty fathoms rope fastened thereto. The greater part of the crew were seen on various parts of the wreck floating about at the mercy of the winds and waves. Captain Bunker and one boy and two boys belonging to Captain Atkins lashed themselves to the deck and the next morning could discover none of the crew. The next day they fell in with the passenger Mr. Gibson who was floating on a part of the wreck.

'Seven days and seven nights did these unfortunate people continue in

⁷⁹ *Alexandria [Virginia] Advertiser*, 12/31.

⁸⁰ *Charleston [South Carolina] City Gazette*, 11/14.

⁸¹ *[Philadelphia] Gazette of the United States*, 5/5.

⁸² *New York Commercial Advertiser*, 4/7.

this dreadful situation, a prey to starvation and misery, to the chances of the ocean and subsisting on nothing save their own urine!' Hope now cheered them and they were taken up by a schooner from Portland to Berbice and two days later fell in with the Philadelphia bound ship *George* from Hull whose captain took them all on board save one of the boys who went with the schooner to Berbice. Four days before the *George* made the Capes, Captain Bunker and Mr. Gibson transferred to the ship *America* bound to New York from Liverpool. Out of the eighteen souls on board the *John* at the time of the catastrophe 'only the above six' the account ends 'have yet been heard of.'⁸³

A week before the disaster of the brig *John*, the ship *Hope* of New Bedford, bound from Wilmington, North Carolina, to Jamaica, met a severe gale in latitude 26° N, longitude 69° 30' W which so increased that on the third day, 8 September, it was as dark as night at noon. The drift of the sea blew over the mast-heads. By midnight Monday the eighth she was leaking. A seaman, John Bolton, was washed overboard. The others lashed themselves to the deck. On the ninth the storm abated. They had no water and for food three candles. That day they found a drowned rat. On the tenth they ate part of the rat and found a piece of pork. On the twelfth they found some more meat but their throats were too parched to swallow. The weather was very hot. On the thirteenth they got a little rain water and a little more on the fourteenth and became sick because they drank too much. On the fifteenth there was a high sea and the deck began to rip up. Two days later they were sighted by the ship *Mercury*, Captain Treadwell, of Portsmouth, where they arrived on 2 October. The next day one of the sailors, Mark Lamb, died. Robert Collett, the mate, died before the squall.⁸⁴

There was not only terror and disaster from weather but there was the continuous fear of capture, by the French wherever they might happen to be, and in the West Indies by pirates. The *Philadelphia Gazette* of 21 July said that 'a gentleman from Guadalope informs that in 16 days there were 42 American vessels captured and brought in there.'

Captives to the French were frequently exchanged. But the schooner

⁸³ *Alexandria* [Virginia] *Constitution*, 10/11, under a date line Philadelphia, 7 October.

⁸⁴ [Philadelphia] *Gazette of the United States*, 10/17. *New York Commercial Advertiser*, 10/18.

Not all the shipwrecks were tragic. The loss of the brig *Rebecca*, involving as it did no loss of life, has aspects that will make some sailors smile. 'On the 18th of September in lat. 22, long. 75, the island of Mero Peroos bearing ENE, running from Chesterfield Key, coast of Cuba, at 3 in the morning found himself close on the breakers. In standing off found it impossible to clear the rocks in that tack tried to go about, but unfortunately got in stays, then attempted to ware, but was too near the breakers—therefore let go both anchors notwithstanding which we went on the reef, bilged and was totally lost.' Account of Captain James Montgomery of the brig *Rebecca* in [Philadelphia] *Gazette of the United States*, 10/15.

Fair America which arrived at New York on 28 January brought a bloody tale with her. She had sailed under Captain Davis out of Saint Thomas on 19 November. Six days later she returned to Saint Thomas under the name of the *Nancy* commanded by one Quatin, consigned for Porto Rico to a Mr. Cassel of Saint Thomas and under French colors. Her name was gone from her stern and every means essayed so to disfigure her as not to have her recognized. She was provided with false papers but the attempts to disguise her were unsuccessful. She was recognized positively and by application of Mr. Donovan, the agent there of the owners, to the government at Saint Thomas she was given up.

She had been captured by the French privateer immediately after she left port. The privateer was afterwards captured by the British frigate *Southampton*, from the captain of which was obtained the log of the *Fair America*, but it gave no intelligence of Captain Davis or any of his crew.

The appearance of the cabin of the schooner on her return to Saint Thomas of itself was enough to excite suspicion; though great pains had been taken to scour the bloodstained cabin, the traces of human gore were 'very perceivable' on the berths and floor, but what appeared to fix the massacre of the crew were the large incisions on the 'births' of the cabin from cutlasses, which the newspaper account concludes 'are now to be seen accompanied with the streaming marks of blood.'⁸⁵

Infinitely more to be feared was capture by Rigaud, leader of the pirates who infested the bite of Leogane on Haiti through which our ships were continually passing to and from the coffee and sugar ports.

These scoundrels attacked in barges in great number when they found ships becalmed and even the presence of a convoying ship-of-war did not necessarily mean safety.

At seven in the morning on New Year's Day 1800 the U.S.S. *Experiment* convoying the brig *Daniel and Mary*, the schooners *Sea Flower*, *Mary*, and *Washington*, becalmed between Gonaive and Tron Corvet was attacked by ten barges carrying about four or five hundred negroes and mulattos.

The *Experiment's* guns were concealed and the pirates mistook her for a merchantman. As soon as they opened fire the *Experiment* replied, as did

⁸⁵ [Philadelphia] *Gazette of the United States*, 1/30, date line New York, 29 January.

That disgust with the French Revolution and fear of the French somewhat like what is felt for the Russians today colored this news, we do not doubt. The log of the ship *Diana*, Captain Davis, London to New Bedford, arriving 23 May after a voyage of 58 days sounds a little like fact embellished with fancy. On 29 March in the evening a ship bore down on them and asked for bread. They said they had twenty-seven men on board taken out of a Danish vessel. They hailed in broken English. The men wore red caps. She crowded on sail away from the *Diana* without waiting for a reply to the request. Her name could not be ascertained but the word Nantucket was on her stern. She was supposed to have been from Savannah bound for Liverpool from the fact she had cotton on deck. She steered southeast.

the *Daniel and Mary* and the *Sea Flower*, wrecking such havoc among them that they retired out of gunshot.

Then they tried to board the *Experiment* but were repulsed with a loss of two barges after an engagement of nearly three hours. In the meantime they had been reinforced by additional barges which put out from shore and which had taken ashore their wounded. During the action two of the barges withdrew, one, boarding the *Mary*, killed Captain Chipman, the other attempting to board the *Daniel and Mary* was sunk.

When it was seen that they had taken the *Mary* she was fired on and abandoned by the pirates who now withdrew toward Gonaive and lying on their oars 'carefully watched our motions.' There was still no wind and by four in the afternoon it was observed that the current had carried the brig *Daniel and Mary* and the schooner *Washington* out of reach of the protecting guns of the *Experiment*, and the pirates were observed to be putting off a third time, to cut off these two vessels. Captains Farley and Taylor decided to abandon, the *Experiment* being too distant to protect them, and their crews refusing to fight. They had scarcely left their boats when the pirates boarded them and towed them off in triumph.

Captain Naley ordered out the sweeps on the *Experiment* to try to cut them off, but desisted when they replied to this manoeuvre by detaching two of their barges and starting after the two remaining vessels of the convoy, the *Sea Flower* and the *Experiment*.

Edward Stevens, United States Consul-general at St. Domingo who was on board the *Experiment* during the engagement and whose letter to Captain Talbot is the source of most of the above account⁸⁶ estimates at the end of his letter that there were no less than thirty-seven barges on the coast from Carthage to St. Marc and at least fifteen thousand pirates.⁸⁷

Few escaped who fell into their hands. The crew of the schooner *Mary* of Charleston were stripped naked, shot, then cut to pieces on the beach of Gonaive, only Captain Anthony and the cook escaping.⁸⁸

Our history as a shipbuilding and sailing people is peculiar. All of our trade, up to the Revolution, was carried in English bottoms—some of which were owned and built here while still these now United States were a colony of the British Crown.

At the time of the Revolution we had no navy, but the tradition of building ships was in our blood and with such few as we could gather together in that difficult time we distinguished ourselves.

⁸⁶ This story is also told in [Worcester] *Massachusetts Spy*, 3/5, 5/7, 8/20, and *Boston* [Massachusetts] *Columbian Centinel*, 3/29, 7/23, 11/1.

⁸⁷ *Naval Documents*, op. cit., V, 1, et seq. Letter of Edward Stevens from Leogane, 2 January 1800.

⁸⁸ *Hartford* [Connecticut] *Courant*, 5/5, also *Naval Documents*, op. cit., V, 382.

Again in 1800, involved in unpleasantness with Britain, at war for all practical purposes with France, with our famous frigates we did well. *Constitution*, *Congress*, *Essex*, *Constellation*, are names we still are proud to remember. Again in 1812, against England, ship for ship we gave good account of ourselves.

In the middle of the nineteenth century we stormed the citadel of fame and we doubt that any will ever attain to where they can challenge the records of our lovely clippers.

But when steam came we preferred its other uses, and abandoned blue water for the tunnels, wheels, pipes and furnaces of factories to make us rich.

In 1917 again our yards turned out ships, many, anachronistically enough, of wood, relying on the breath of God to move them rather than the machinations of man. This was no happy venture and much highly regarded money was lost in it.

Now again we are building ships, none today relying for power on wind, and the white sails are farther than ever from our merchant ships and forgotten by our merchant sailors.

All in 1800 was based on these white sails and the uncontrollable winds, and in Castine and Wiscasset, in Portland and Portsmouth, and Salem, and Boston and Plymouth, New Bedford and Newport and Providence and New London and New Haven and New York and Philadelphia and Wilmington and Annapolis and Baltimore and Richmond and Norfolk and Edenton and Newburgh and Georgetown and Charleston and Savannah, the water front resounded to the whistles of the bosun's pipes, the beat of the drums to quarters, the salute of the guns to the town, the rattle of blocks, the hammer at the chocks as the anchor was let go, and the roaring rattle of chain cable through the hawse pipes, the sailors' sweetest music.

Salving the Ship *Crystal Palace*

*The Private Journals (1857-1858) of Captain Benjamin F. Simmons
and Second Officer Joshua N. Rowe*

EDITED BY JOANNA C. COLCORD

THE American clipper ship *Crystal Palace*¹ of New Bedford sailed from New York for Sydney 18 July 1857 on a voyage which took her into far Eastern waters, and which was to involve her in a strange accident, from which ship and cargo were rescued by the resourcefulness of her captain and the sweltering toil of officers and crew, but from which she was to return under the command of a new master.

It has been possible to reconstruct this voyage, in its main events, only by bringing together items from a number of different sources. Chief among them are two journals of the voyage, kept, unbeknown to each other, we may be sure, by Captain Benjamin F. Simmons and the second officer, Joshua N. Rowe. The official log, kept by the chief officer (and later in the voyage the captain), Loring P. Hammond, has not come to light; but it has been possible to bring together and compare the two private journals through the courtesy of Joshua Rowe's daughter, Mrs. Alice Rowe Snow, and of Captain Simmons' grandchildren, Mrs. Frederick H. Taber and William S. Bourne. A great deal of supplementary information has been supplied by William H. Tripp, curator of the Old Dartmouth Historical Society and Whaling Museum at New Bedford, and by Carl C. Cutler, secretary of the Marine Historical Association, Inc., at Mystic, Connecticut.

Captain Simmons kept his journal only at sea, so that it discloses no information about freights and cargoes, and little beyond wind, weather, latitude and longitude when things were going well. When disaster overtook him, however, he set down a faithful account of what happened. Rowe, on the other hand, gives considerable rein to his fancy, and enters daily events and his own philosophy and observations.

¹ The ship *Crystal Palace* was built in Eastport, Maine, in 1854, and was at once sold to New Bedford account. She registered 633.4 tons (149.9 x 30.9 x 19), and is described in *Lloyd's Register* for 1858 as a 'medium clipper.' In 1855, she appears to have been owned in New York, but on 19 March 1857 her sale is recorded back to a group of New Bedford owners headed by Henry F. Thomas and Edward Taber. In 1869, the vessel was under English registry and had been re-named *Victoria*.

It seems best to begin, therefore, by using Rowe's journal as the basic document up to the time of the accident, and then shift to Captain Simmons' account as the chief source of information.

This was Rowe's third voyage in the *Crystal Palace*. After an arduous apprenticeship to seafaring in the fishing trade from his native Maine coast, which he entered upon at the age of twelve, and in the course of which he had twice been shipwrecked, he shipped as boy on the *Crystal Palace* in the spring of 1854, aged sixteen. His pay was to be eight dollars a month — 'but being up to snuff, I got \$10.,' he says in parenthesis.

By the end of the first voyage (in March 1855) which took the ship to Melbourne, Callao and the Chincha Islands, he had worked through his seamen's ratings, and began the second voyage, when he was not yet eighteen, as third mate. On this voyage (June 1855–March 1857) they went again to Melbourne with passengers and freight; took a load of coal to Calcutta, where Joshua almost lost his life in a 'bore' on the Hoogly; returned to Melbourne and went in ballast to Valparaiso, where the *Crystal Palace* was nearly cut down at anchor by a French ship which fouled her; and finally got a cargo home from the Sandwich Islands, consisting of oil and bone deposited there by the New Bedford whaleships.

During the third voyage Rowe, now advanced to second mate, set down some character sketches of his shipmates in the afterguard.

I will commence with the Captain but I must be very carefull and not put anything down that is offensive to him, for he could look over this book any time that he felt inclined, for it lies on my shelf in sight of everybody. However, he had not ought to be offended at the truth.

He stands 5 ft. 5½ or 6 in. in his stockings, very dark complection, black hair and whiskers sprinkled with a few gray ones. He is about 40 years of age. Born in Woodstock, Vermont, but when a small boy he went to New Bedford to school a few years. He then went to sea in the ship *Franklin* of New Bedford on a whaling voyage to the Pacific Ocean, which occupied 4 years. He then went out boatsteerer of another ship. After coming home he shipped second mate of a ship, but disagreeing with his Capt. he left her in Australia. He remained on the coast of New Holland 3 years, during the time he was mate and master of several small coasters. When he left Australia it was with the notorious smuggler Dunlop, whose employ he was in. He sold his brig in Valparaiso and went up into the country where his brother was in business. He remained a short time, and wanting to go home again, he started, and a short time after arriving his brother, Bezer Simmons, who was master of a whale-ship, wanted him to go with him as chief mate, which he did. The ship's name was the *Magnolia*. The gold diggings of California broke out about that time, and Bezer Simmons bought large lots of land in San Francisco. After the *Magnolia* came home she took passengers for California, and Capt. Frank Simmons took command, while his brother Bezer went overland and established that great banking house of [blank left]

Frank Simmons excepted the place of chief officer of the *California*, a steamer that run between San Francisco and Panama, which he held about 3 years, but having a flare-up with the purser he left the service in disgust and returned home, and in the spring of 1854, Thomas & Taber of New Bedford bought the *Crystal Palace* and gave him command of her, which he has held ever since, much to his credit and profit to the owners.

He is a great favorite with the ladies, and his guitar generally goes on shore with him, which he plays pretty well. He sings a number [of] plantation melodies (I think) with a little more confidence than skill. He is fond [of] narrating escapes and adventures in which he is generally the hero of his own romance, with but very little regard for the truth. He drinks his brandy and water when he wants it, but I never saw him intoxicated. He is very proud, even vain, and always goes richly dressed when at sea, and is the best man to entertain passengers in the world (ladies in particular). I think he prides himself upon his firmness, but a man that has been with him will know how to take him. He has a wife and two children in New Bedford.²

I will take the chief mate next. He is 6 feet in high and pretty well proportioned. He has a long black beard which he never shaves, which gives him a very savage appearance. He [is] a good seaman and good disciplinarian. He has a peculiar 'Do not be to familiar' kind of an air that keeps his superiors as well as his inferiors in their place. He is about the same age as the Captain and has been 20 years whaling and 5 years in the merchant employ. He has been around the world a great deal and has acquired the knowledge of a thorough seaman without the coarse vulgarity that generally marks a sailor. His name is Loring P. Hammond of New Bedford, where his wife and child resides.

I shall say nothing about the second mate, for he is not worth talking about. It is sufficient to say that he is a young man and tries to do his duty. His name is Joshua N. Rowe of Rockland, Maine. He is an odd fellow and won't drink rum.

We have no steward this voyage, but the cook's wife is stewardess. His name is Theodore Gale, so of course she is Mrs. Theodore Gale, and I will give a short account of this amiable lady. She is a quadron of about 5 feet in high, and she is about as broad as she is long. She weighed 210 when we left New York, and I think she will go 20 more now, yet she gets around decks remarkably well for her model in bad weather. She is a good stewardess and does her work well. She has been to sea 3 or 4 years in the same occupation. She is like all other women, her tongue is always going, and Heaven help the cabin boy when she is in ill humor, which is not seldom. When she is in good humor her features are quite handsome, but when she feels cross she can put on the sulkiest face that I ever saw. Her 3 or 4 years at sea furnish her with an everlasting fund of yarns.

² Not a great deal has been learned about Captain Simmons' history before he took command of the *Crystal Palace*, other than the details here given, which Rowe presumably had from his own lips. The ship on which he was boatsteerer was probably the *Hercules*, in which he was serving in 1838-1839. In 1841, he was second mate of the *Berkeley*; it was probably this vessel which he left to go adventuring in Australia and Chile.

He went mate with his brother Bezer in the *Magnolia* in 1845 and succeeded to command of her in 1848, which would place his period as mate of the steamer *California* as about 1851-1853. He appears to have taken the *Crystal Palace* practically 'off the stocks,' for he was her master in the spring of 1854, when young Rowe joined her.

Bezer Simmons captained the ship *Cicero* on a whaling voyage that began in July 1840, and probably transferred to the *Magnolia* at the end of that voyage.

We have a very odd character on board in the person of our doctor, which is about as much of a doctor as I am. His ways of doctoring are very hard. He is fond of letting blood, putting on large blisters, giving emetics &c, &c, and by the way, he is very superstitious, and a Dutchman by birth, and was born the same day that I was. So of course he is not quite 21 yet. He and Appo, the [Chinese] interpreter, are great enemies for the following reasons. Three or four days out of Batavia Appo was sick a little, he had the headache or something of the kind, and he asked the doctor what was good for it. The doctor immediately went to the chest and spread a Spanish fly blister as large as my hand and put it on the back of his neck. Poor Chinaman, not knowing what it was, let it remain, but he complained bitterly. The doctor consoled him by saying: 'Ish very goot, let him pee.' And he did let him pee untill the back of his neck was one solid blister which he did not get over for two weeks. But the cream of the joke was to see the doctor the next day after it was drawn. He had the poor Chinaman by the tail, vainly endeavouring to cut the blister off with a pair of dull snuffers which he had taken out of the pantry in the absence of the scissors. I was eating my dinner and I heard the noise in the after cabin. They soon appeared, however, where I was. On the countenance of one was depicted anguish and despair, while the other had stern resolve to do his duty written upon it. And add to all this, he is the biggest fool that I ever saw. Last night the Captain filled his snuff box with cayenne pepper, which he did not find out until he had taken two good pinches.

We are painting the ship inside, and he is down on his knees busy painting the after hatch combings, while the Capt. is painting sundry circles on his bare heels that stick up out of his slippers, and also some comic figures on the seat [of] his pants.

They reached Sydney 27 October 1857, taking coal ballast thence to Batavia. The ship *City of Palaces*³ had put in at this port shortly before, having on board a mutinous shipload of Chinese coolies returning to their homes from the gold mines of Ballarat; and Captain Simmons accepted a lucrative charter (12,000 rupees) to carry them to Macao. The lower hold was filled with a half-cargo of rice and the 'tween-decks with coolies; two large iron deck-tanks were installed and 11,000 gallons of water taken aboard; four extra men were shipped as guards (and probably also the 'doctor' described above), and they and the ship's officers were heavily armed; and the *Crystal Palace* sailed 11 March 1858, taking the Carramatta Passage. On 22 March, Rowe writes:

We was about 5 miles from Souton at 4 P.M. with a light breeze and $2\frac{1}{4}$ or 3 knot current, both of which was against us. We should anchored, for it was evident that we was losing ground fast, if it had not been for a large black cloud that was coming up on our weather bow that indicated wind and a plenty of it too. We clewed up the topgallant-sails, hauled up the courses, hauled down the jibs and stay-

³ This vessel, twice mentioned in Rowe's journal, cannot be identified through the usual sources. Carl C. Cutler writes: 'It impresses me as the sort of name that might be given to a vessel purchased by some Oriental, either in India, China or Siam . . . quite a few of our vessels have disappeared from the records simply through being sold to the East and undergoing a change of name.'

sails, and stationed men to the topsail halyards fore and aft. The squall struck us. Let go everything, cried the Capt. Ay, ay, sir, was the answer, and down come the three topsails on the caps in an instant. We was clostreefed, lying nearly on our beam ends, drifting dead to the leeward on to the rocks. Everyone was standing holding on like grim death, looking at the shore and then at the ship, and cast a look over the side to see if she making any headway, for although she headed out past the point, yet we all knew that she must go through the water very fast to weather the point before the current set us so far to the leeward that we could not fetch by.

After the first blast we righted a little, not so that we could walk on deck, however, without holding on to something. The Captain saw our position and also the only remedy for it, that was to make more sail on the already overburdened ship. He gave the order to hoist the main topsail, which was done. She began to gather headway, when we heard the cry of Sail Ho. Where away, asked the Captain. Dead ahead, sir, coming right into us.

Oh how I wish some of my acquaintances could [have] been there. What splendid confusion! The topgallant-sails which had not been furled were snapping and cracking like 10,000 coach whips, while the courses were hanging by the buntlines and every now and then would crack as if all the masts had gone by the board. Add to this the ship nearly on her beam ends and raining great guns, the decks slippery, the ropes all foul of each other, snarled up in one mass in the lee scuppers and stopping the water from running out, causing a small ocean to be formed to leeward.

On came the strange ship. She saw us and luffed up and cleared us, but [by] a very short distance. We read her name, it was the *Alliance*,⁴ an English ship. She was soon lost in the distance as quickly as she appeared. When she was gone we turned once more to look at the land. We had drawn much nearer, and had gained a little on it, yet the result was doubtful. We was [too] near to wear ship and tacking was doubtful. So we must weather it or go ashore, and the shore did not look [word illegible] for it was bluff rocks.

The Captain gave orders to set the fore topsail and board the fore and main tacks. When this additional sail was put on, she reeled over, the masts bent like twigs. Every rope yarn done its duty. We had no more to do, she must do the rest. The good ship seemed to know it, and she nobly acquitted herself of the burden, for in one hour we was past the point, and not a breath of wind, and we let go the anchor to keep from being taken back by the current.

For the rest of the passage, however, they had fine weather. 'I think this is the most pleasant passage that I ever made,' writes the young officer. He begins daily entries in his journal, setting down distances and bearings of land sighted, and sage observations on what shipmasters should do in these waters, which sound like a combination of veteran commander and Blunt's *Coast Pilot* — his years being at the time just twenty!

But most of all it is the Chinese passengers which excite his interest.

Last evening I had a talk with Appo, our interpreter, about their religion. He says that the people believe in one God, and that their small gods are similar to the

⁴ Captain Simmons gives her name as *Reliance*.

Catholic priests, and they intercede in their behalf. . . . I have noticed that all of our passengers can read and write, and at supper I enquired of Appo how the schools are constituted in China. He told me that they were similar to the English schools except that their commissioners or school committees had the power to compel the children to go to school. They have no alphabet but they use characters each one denoting a different thing. Nevertheless, they are supposed to get their education in 7 or 8 years. They generally commence between 7 and 10 years of age.

The coolie trade, he says,

is just as bad as the slave trade, only it has a different name. The cooly agents in China give them to understand that they [are] going to a country where they will get aplenty of gold, and they must work a certain number of years (10) to pay for their passage. They consent and are taken on board and are carried to the West Indies, Chinha Islands, the Isle of France and other places and obliged to work hard in the rice swamps &c, and 9 cases out of 10 they do not live to work out their time, and the few that do their constitution is gone and they are glad to get home to die. Yet it is a good thing for the planters, for they only pay 150 or 200 dollars for them in the first place and they get all their work out of them and are not obliged to keep them in their old age. But if they bought negroes they would pay 800 or 1000 dollars apiece for them and would have to keep them when they were old. So the chances are 5 to 1 in favor of the coolys. They sometimes find out the Captain of the ship's intention and raise a mutiny. Several ships have been taken by them, a short time ago a ship came into Batavia after a double crew. She was a large clipper ship with 700 on board. They attempted to take the ship. The Captain, officers and crew had a hard fight, they succeeded in putting them down. They shot one and hung another at the yard arm. Another ship the Captain was taken sick and the Chinese arose, and the mate put on the hatches. The next morning he hoisted out of the hold 260 dead Chinese and hove them overboard. They suffocated during the night.

He comments on their methods of caring for the sick and burying the dead (three of the passengers died on the trip north), their gambling, their loquacity, and their food habits. The ship supplied only water; the coolies brought along and prepared their own food, and bargained with Captain Simmons and with the master of a passing vessel for two hogs, which they slaughtered. 'Nothing was lost, the blood and entrails were saved. Even the butt-ends of the bristles made good soup!'

The Carramatta Passage was well populated with ships, and much visiting back and forth was indulged in by the captains, in spite of the danger of squalls, piratical attacks, and uprisings of the coolies. They were in daily company for over two weeks with a French ship, the *Ville de Bâle* (ex *Mechanics' Own*⁵ of New Bedford), and Joshua became bored with so much socializing.

⁵ The ship *Mechanics' Own* was built by Bishop & Simonson, New York, in 1849, for an 'Association of Mechanics.' She was 540.58 tons (128.2 x 30.7 x 15.35). She was bought by New Bedford owners in 1854, apparently for the sole purpose of sending her to the Sandwich Islands to bring back oil and bone landed there by the whaleships. As soon as that was accomplished, in 1856, she was 'sold abroad,' the name of her new owner being Louis Dufais.

The French ship has been clost by us all day. Last evening we fired a rocket and he answered by firing two cannon. I wish the Old Boy had the ship, she is a great bother to us (that is, the officers and crew). The Captain of her is now on board of us (6½ P.M.), and I expect every moment to hear the Captain call me to man the boat and set him on board, which is no easy job with a strong breeze and a short chop of a sea to contend, and both ships going 6 knots.

The *Crystal Palace* was a better sailer than the Frenchman, but young Rowe notes a curious circumstance.

In the night the *Crystal Palace* takes the lead, and in the morning the Frenchman is 5 or 6 miles on her quarter, but as soon as our passengers turn out, she overhauls us hand over hand, until she takes the lead which she keeps until our passengers turn in again. Then we overhaul the Frenchman. It is owing to the effect the passengers have upon the trim of the ship, for when they are on deck they are not allowed beaft the main mast, and there is always from 50 to 100 on the topgallant forecandle, which brings the ship down by the head, but when they are turned in their weight is equally divided fore and aft, so that the ship is in proper trim and will go ahead faster.

They also signalled the American ships *Justina*⁶ and *Loochoo*,⁷ both bound to the northward. They were in company for several days with the *Cohota*.⁸

The Captain came on board and Captain Simmons returned to his ship with him. He has his wife and family on board. One of his children came on board, a fine little fellow of 7 or 8 years. Captain Simmons gave him a little bantam cock which he was very much pleased with.

The next day, visits were resumed, and the two captains traded small stores.

They crossed the equator on 27 March, 'making the eleventh time for me.' As they ran up on the Cochin China coast, native craft began to be seen, which young Joshua observed with professional interest.

Saw a very large prow yesterday afternoon bound to Singapore from China. She is an odd machine, and I cannot think how they got their model for so much ugly-

⁶ A bark named *Justina*, 249 tons, was built in Baltimore in 1852 and was commanded by Captain Black. This seems a small vessel to have been trading in far Eastern waters, and there may have been another vessel of the name.

⁷ The ship *Loochoo* was built in Medford, Massachusetts, in 1840. She registered 639 tons, and her picture, in Robinson and Dow's *Sailing Ships of New England*, shows a clumsy looking craft with painted ports. She was commanded by Captain William Whippin. In 1849, when carrying passengers to the gold diggings of California, she took 192 days to make the passage from New York (Cutler, *Greyhounds of the Sea*).

⁸ The ship *Cohota* was built by William H. Webb in New York in 1843 for the Griswolds. She was 691 tons (145.6 x 32.3 x 20), and was commanded during some voyages by Captain W. B. Gerry. Her passages between New York and San Francisco were medium — Cutler records 124 and 138 days — but in 1845, under Captain Hepburn, she made the passage from China to Hatteras in 100 days. In the light airs of the Carramatta Passage, the Journal records that the *Crystal Palace* out-sailed her without difficulty.

ness. . . . There is a great many fishing boats all along shore, they are small and pretty well built and are manned by two or three men. They sail remarkably well. We could not call them on board, I suppose they thought we would take their fish and not pay them. . . . It seems strange to a stranger, for they always go two together with drudges down and a net stretched between them to catch fish in. They have a high picked stern and are very low forward, and carry three masts but no bowsprit. The foremast pitches over the bow which gives them head sail enough. The other masts also pitch forward. Their sail is something in the leg-of-mutton shape with slats of wood across them. Some of them have 6 or 8 slats. They have some means of shortening sail, one slat at a time, untill they get it reduced to suit the occasion.

They reached Macao on 18 April, got rid of their 'long-tailed scoundrels' and their cargo, but were then delayed for repairs. On 1 May,

The larboard cheek of our foremast had been very bad for some time and was getting worse, so that we had to have a new one. We sent down the topmast and lower rigging, and the carpenter went up to take the broken cheek off and found a rot under it in the mast. The Captain gave orders to haul the ship into the harbour. We discharged our cargo the 30th of April. So this morning we turned out at 4 A.M. not to go Maying, but to heave up the anchor, which we did in a short time, and stood in, with 5 or 6 boats on ahead to keep us straight, for we had nothing to set forward in the shape of sails.

While lying at Macao undergoing repairs, discharging and loading, Joshua Rowe continued his interest in Chinese manners and customs.

Everybody knows that the ladies feet are very small, caused by binding them when they are small. I have been told that they sometimes ulcerate and cause them great pain, and owing to the blood being stagnated they smell rather loud at times. However, this custom is not followed up with the lower classes, they allow their feet to grow as large as nature intended. This is not enforced by law, but is fashion, which is still more cruel.

The Chinese ladies wear loose pants and a kind of frock that resembles a butcher's shirt, that comes down nearly and sometimes quite to the knee. The upper classes do not differ much except in the quality of the clothing. They generally go bareheaded except when the sun is very hot, and then they put on a large hat that looks like an umbrella. I cannot describe their hair, for it is an odd contrivance built of gill-guys and braces covered with hair, and when it is all done it looks like the handle of a mamouth flatiron fastened on the back of their heads.

At a Chinese theatre, he heard what he calls 'the most horrid music on earth, which makes a person feel as it he was just recovering from a fever and had all his teeth lute from the effects of taking mercury.'

The ship was chartered for Bombay, with a lower hold full of '4,000 bags of soft sugar and 4,000 tubs of sugar candy, two or three thousand chests of tea, a lot of camphor, and some copper gongs to make ching-

ching for josh,' which they ran across to Hongkong to load, returning to Macao for a 'tween-deck load of tea and silk. The ship was 'chartered to a Parsee house for \$6500. cash down, \$3500. of it we now have on board in hard dollars.'

The white crew was discharged in Hongkong:

They were a set of scoundrels, and I am glad of it. While we laid at Macao an officer had to walk the topgallant forecastle to keep them on board, and another one aft, armed at that. We now have an Arab crew, all except 5 or 6 Bengallys, and a boatswain and his mate. We have 29 men and 4 sea cunnys⁹ besides the after guard, amounting to about 40 men all told. Things go on very well. We can set all of our topgallants at once, hoist the topsails all together, can furl the sails at the fore, main and mizzen all at once. Everything goes with the boatswain's whistle and a fathom of good ratline stuff. These men are much better than white men, for there is always something the matter with them, they [i.e., whites] cannot stand the climate, they die off like sheep. So it is best to get these at once. I advise all persons to take Arabs in preference to Lascars, they are good sailors and pull together.

They sailed for Bombay on 9 June 1858, Joshua's twenty-first birthday. 'Of course I am out of my time today, but I do not think I feel any different. I have not been home upon a birthday since 1847, that is 11 years.'

Having a very valuable cargo under their charge, the danger of attack by pirates was much in the officers' minds, and Joshua remarks:

Ships coming to these seas ought to have 4 or 6 large 12 or 14 pounders, and small arms enough to furnish every man or board with a set of side arms. We saw enough of the pirates to know that they are not to be fooled with. When we were going past the Ladrone Islands we saw a ship's masts above water, but no one knows how she came there or what ship it is, but there is a ship missing that started from here 3 or 4 months ago to go to the north for a cargo with money on board. The Captain had his wife on board. They were all murdered by the pirates, there is no doubt. Every day there is some junks chased in at this very port [Macao]. I have seen a craft come in that mounted 6 swivle guns and 150 men that did not dare go outside of the harbour. Two or three days ago a large Portuguese schooner was nearly taken. They were most all killed when a steamer came around a headland clost by and the rascals could not get clear, so they were taken and brought into Macao to be tried.

But their closest brush with pirates is amusingly described by Joshua, in a passage which shows the self-improvement which he has made in the art of narrative composition. It was on the passage home; they were off the north coast of Celebes; the land was 'clost aboard.'

About 9 A.M. spied a suspected pirate prow bearing down upon us. Cleared the decks for action, guns cast loose, powder and shot handed up, and the men

⁹ White members of native crews who served as quartermasters. Cf. Charles Nordhoff, *The Merchant Vessel* (1856), p. 207.

informed what they were expected to do in the coming strife. It was quite interesting to see the fierce look the wild Arabs put on and the cowardly one of the Bengalys. In one you see men determined to sell their lives as dearly as possible, and on the other hand you see them afraid of their lives yet dare not defend it, and if it was not for the serang's¹⁰ cat (which is a good one) they would all skulk below. But the old serang is a regular old fire-eater and swears he can depend upon his Arabs against 200 pirates.

In the meanwhile the pirate was coming up. We gave up all hopes of getting off without a fight. She began to swing off so as to present her broadside, her deck was covered with men. She was now within a mile of us lying directly across our path. Hopeful hearts now began to feel faint; the fierce Arabs grasp their boarding pikes with renewed energy. They looked like the genius of war going forth to battle. Every eye was fixed on the enemy, when all at once a strange commotion was seen on board of her. What could it be? A wefting of garments as if in distress and required assistance from the very ones that they were about to murder. All at once they were hurled into the air as if by magic. Surely the hand of Providence is in this and their magazine of powder is taken fire and they are sent into another world in the very act of committing one of their horrid deeds. A person turns his eyes from the scene. But a strange curiosity to see how all this is to end causes him to look again. Their lies the shattered hulk with its timbers standing out in all directions. And the men, they who proudly walked her decks bidding defiance to the laws of God and man, where are they? My God, look! Instead of descending into the sea after being blown up they remain in the air over the scene of their late disaster, whirling and turning over and over as if siezed with the pains of the damned before their spirits had left their bodies.

When all at once the problem is solved. The pirate prow is an immense coconut tree with two branches erect that we took for sails. She was manned by 2 or 300 large birds that we took for men, and our near approach caused them to start up, and that left the roots of the tree exposed which looked like shattered timbers. A wild Hurrah from the Arabs who were disposing a few kicks and cuffs among the cowardly Bengalys announced that the battle was over. The shrill whistle of the serang's pipes called the men to their duty.

At first Captain Simmons 'headed the ship to the eastward with the intent to go east-about,' but he met strong easterly winds, and 'thinking it too bad to lose such a breeze for the China Sea, I put her away south.' On 16 June, 'becoming satisfied that I should have hard work to beat [down] the China Sea at this season,' he returned to his original intent, and 'bore up for the Mindoro Passage.' This was to prove a costly decision.

They met squally, unpleasant weather. When it cleared, Joshua Rowe philosophizes:

What a glorious sight it is to see the sun once in a week, especially when a person is obliged to stop on deck 12 hours out of 24, never mind how hard it comes down. In the night, when a person is hugged up to the weather rail with his head over the

¹⁰ The boatswain or chief officer of native crews, who translates the orders to the men.

top of it to look out for squalls, it is then his mind goes back home. He thinks he is skylarking with the girls, or out riding or sailing or courting, or something of his favorite amusements. I often imagine myself at home, snugly married to some pretty girl, with a neat little cottage and a rousing fire, and blowing and snowing outside. I take up my chair to hitch up to the fire and wife at the same time, when Slap! comes a sea in my face that recalls my mind in a second although thousands of miles off, and I find myself shivering with cold, wet, cross, and in fact altogether out of sorts, and instead of finding myself at home, it is off Cape Horn or Cape of Good Hope or some other confounded cold place. It is then a person will vow he will never go to sea again, but he forgits it the first fine day.

On 17 June, Rowe records:

We are now in the Northumberland Straits, and if the wind holds we shall soon be in the Mindoro Sea. We shall have to work ship sharp for the next two or three weeks, for we are going through five or six small straits before we get into the Indian Ocean. But when we do get there, we shall go off fluking with a fair wind. . . . I suppose we shall stop to some of these islands to the south of this and get a supply of water and fresh provision, fruit &c, perhaps Lumbock or Timor.

On the twentieth, they

had a little wind from the N.E. It came on with a heavy squall which came near taking our masts out. Everything was let go, and we clewed down and clewed up everything except the lower topsails. We lay nearly on our beam ends for 20 minutes. Our crew was on hand — except those confounded Bengallys. I tipped one or two over in the lee scuppers to cool off. If I had my way, I would set them on shore on one of these islands and let them go wild as they were intended by nature. Last night in the squall we had a fine chance to see how they would work in a pinch. The Arabs turned to manfully. It blowed so hard that orders could not be heard ten feet, the rain come down in torrents. They saw at a glance what was to be done, and in ten minutes they had the ship under clost reefed topsails and jibs hauled down. The squall lasted about half an hour, and in 15 minutes after we were under topgallant sails.

After that, the winds were light and baffling; in the Sulu Sea they got up under the lee of Panay and made little headway. Rowe's journal breaks off for a week, during which they fell in company with the bark *Magi*,¹¹ bound home from Manila.

The night of 27 June the two vessels spent in company, anchored in thirty fathoms of water about four miles from the land, on the Mindanao side of the entrance to Basilan Strait, which connects the Sulu Sea and the Celebes Sea. The town of Zamboanga lay about twenty miles to the east of them. The Strait of Basilan is only about six and a half miles wide at

¹¹ The bark *Magi* was built at Greenpoint, Long Island, in 1857, along medium clipper lines. She was 675 tons (147 x 31.8 x 19.8). In 1858, she was owned by Tucker, Cooper & Co. of New York and commanded by Captain Luce. By 1869, she had been sold to Dunn, Russell & Co. of Shanghai and re-named *Jona*, shortly afterwards disappearing from the records.

its narrowest point. Basilan Island, twenty miles long and four thousand feet high, which forms its southern shore, was 'a nest of thieves and pirates, the most expert in the Archipelago,' according to Findlay's *Directory*.

From this point, we turn to Captain Simmons' journal for the main events.

Monday, June 28th. Come in with light airs from the N.W. and pleasant weather. At 8 A.M. with the turn of the tide took anchor in company with the bark and worked along shore to the east. At 10 A.M. calm, the ship drifting with the tide to the east with no command of helm. At 2 P.M. light airs from the south, but not enough to give the ship steerage-way. Continuing to drift to the eastward until abreast of the town of Sambuanga,¹² when finding that the ship was drifting into the bight and not likely to go clear of the next point east of us, I deemed it prudent to come to an anchor in 30 fathoms water. Did so, and as the ship was heading direct with the tide she of course run at once over her anchor and brought up with about 50 fathoms of chain out, and as she swung to the tide the cable caught in the calf of her cutwater and shoe, and took the cutwater and a piece of the main stem completely off up to about the ten foot mark. At once sounded the pumps and found the ship making water fast. Send down Lascar divers and brought up the piece, also drove a plug in a bolt-hole in the stem. Found by the piece that was brought up that some of the wood ends [*illegible*] a part of the garboard, and one or two more was left entirely exposed, with all of the oakum drawn out. I at once called upon Captain Luce of the bark *Magi* who had anchored alongside of me, to come on board, and together with the Captain of the Port held a survey on the piece of wood that was taken off; and they at once advised me not to think of proceeding on with the ship in such an uncertain state, the ship at that time making eighteen inches per hour. So ends this day of Bad Luck.

Mr. Rowe's account of the accident is substantially the same:

Today we got under way. We had a very light air so that we could lay along, and a tide running from 4 to 6 knots. The *Magi* got under way at the same time and drifted in so near she was obliged to let go her anchor. We glided past him, the Capt. hailed him and told him he had better try it again, which he soon did. It seemed as if some invisible power was wafting us along the shore of fairy-land. So smooth was the water that the trees and even the leaves and the color was reflected in it as if it was a mirror. Now and then we would hear the chatter of some monkeys and then the singing of birds, and in this way we went along about 20 miles to Samboangan. Here the tide swept us in towards a point, and the Capt. thinking he could not clear it let go the anchor. There was 18 to 20 fathoms of water, and when she swung to her anchor the chain caught the end of the stem where it joins the keel and ripped out about 15 feet of it, so that some of our crew made a rope fast to it and we hoisted it on deck. She makes 15 inches of water per hour, all hands at the pumps. Our divers have put half a bushel of oakum in the holes, still we can hardly keep her free. We must discharge our cargo here.

¹² However spelled in the journals, this is the self-same Zamboanga in which 'the monkeys they grow tails,' as the song of Spanish-American War days has it.

Here, then, was a situation that no shipmaster would have been prepared to meet — on a calm and beautiful tropic morning, his ship tears her nose out on her own anchor-chain, and begins to sink. The cargo is perishable, and may easily be pumped into the sea along with the water from the hold. The resources of the jungle country in which they find themselves are small — no dockyard, no machinery; just raw materials, canoes, and native labor to be had from shore. No danger to life from shipwreck is involved, but pirates swarmed in the Sulu Sea and news of a disabled ship flies fast; they might have to defend themselves and the ship as well as repair her. This seems the place to pause and raise the question, what would *you* have done? Correspondence on this point is solicited! What the master and men of the *Crystal Palace* did to save the ship and cargo will be reported in the succeeding issue.

Sealing Boats

BY A. ALFRED MATTSSON

THE sealing boats used in the South Atlantic in the early years of this century¹ were double-enders (Fig. 1) about 19 feet long with 4½ feet beam. Those built on the Eastern seaboard were all smooth planked (carvel), with half-inch pine planking; birch or maple keel, stem- and stern-post; and steamed and bent ash ribs. The ribs were spaced about twelve inches apart through the middle of the boat and farther apart at the ends. A smooth planked boat will ride the seas easier and do less splashing when going up on sleeping seal.

The western-built boats were cedar planked with fir framing and all lap strake (clinker). They would sail and row better but turn a little harder than the eastern boats. All, however, were very fine row-boats; just like small life-boats. Since they were not all built by the same man there were slight differences in them; some straighter on the bottom, others more rocker-bottom type.

Both sprit- and gaff-sails were used in sailing them. The old-timers who had been sealing from the West Coast used the spritsail, but the younger men from the East Coast preferred the gaff rig. The sails were rigged in the simplest way possible.

The mast, a light spruce stick, averaged 12 feet long by 2½ inches thick in the middle. Boom, sprit, or gaff were much lighter, but perhaps as long as the mast. A rope grummet was driven on the mast to about a foot above the mast thwart, and nailed fast.

The sail was permanently bent to the boom, the jaws of the boom being jammed under the grummet on the mast (Fig. 2), forming the 'goose neck' when the sail was set by a single quarter-inch halyard at the throat. Mid-way of the hoist or luff of the sail a hoop was fastened to the sail (Fig. 3), somewhat larger than the mast. The top end of the sprit was driven through a small loop or eye in the peak of the sail and its lower end was

¹A. A. Mattsson, 'Fur Seal Hunting in the South Atlantic,' *THE AMERICAN NEPTUNE*, II (1942), 154-166.

fastened permanently to the hoop midway up the mast. This was the only part of the sail that was fastened to the mast except the halyard, which led through a hole in the top of the mast and was fastened to a pin in the thwart with a slip knot. One jerk and down she comes! When a reef is needed, lower down on halyard a bit and roll the sail up on the boom, clear up to the hoop if necessary; jam boom jaws under the grummet; then set up on the halyard, and there you have it, all in a few seconds.

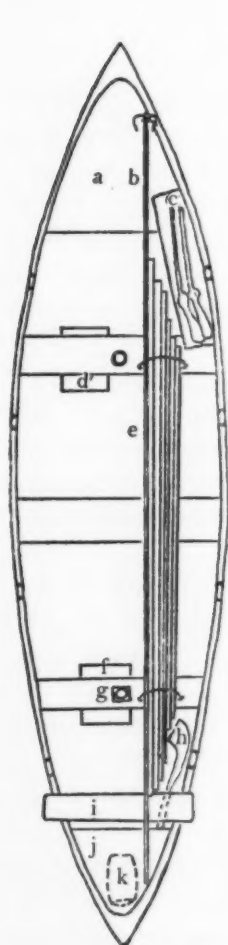


Fig. 1. Deck view

- a. Bow cuddy
- b. 17-foot seal gaff
- c. Gun rack, canvas covered
- d. Ammunition box
- e. Sail, spars, and three pair oars



Fig. 2. Both boom and gaff jaws were open on forward end

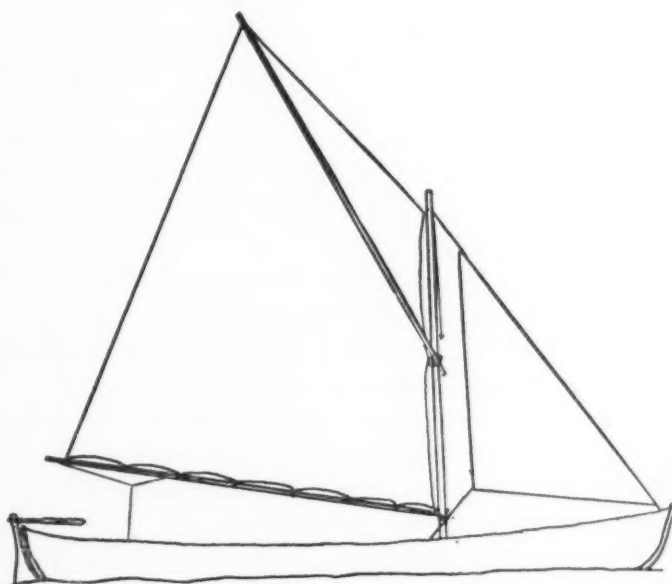


Fig. 3. Sprit rig

- f. Lunch box
- g. Compass
- h. Rudder
- i. Loose pushing board
- j. Stern cuddy
- k. 2 1/2 gallon water breaker, under stern cuddy

I liked the gaff sail better. It set better, drew better, and lasted longer. A spritsail always developed an unsightly pucker at the hoop because the sprit was permanently bent on there. We couldn't be bothered with a strop around the mast for it as the sail had to be set or lowered in a few seconds, mast and all.



Fig. 4. Gaff rig

The gaff sail (Fig. 4) was bent on the same as a spritsail except for an extra hoop close under the gaff jaws. That was to hold the jaws in place at all times whether the sail was up or down. The sail was permanently bent on the gaff the same as on the boom, and the halyard fastened to the *right spot* on a bridle strop on the gaff.

The sail material was yard-wide cotton drilling. It took less sewing than sail cloth, was always soft, was strong enough for the purpose, and lasted about two years. Halyards, sheets, and bolt ropes were all quarter-inch manila. The bolt ropes were sewed inside the hem, leaving the rope free except at the corners.

When hunting under sail the hunter stood on the mast thwart, one foot next to the mast, the other foot on the weather gunwale. With one hand he held the jib halyard; his other hand was on the jib luff. By pulling the jib down a bit he could see to leeward, while keeping his weather eye open. The sealers of the West Coast used three men in the boats. That way, the hunter could keep a better lookout for seals and didn't get winded pushing on the oars when chasing travelers. The boat puller would sit on the middle thwart facing aft, the boatsteerer and hunter facing forward. We also had three men in the boat when hunting around a rookery, but two when out on the grounds, which was of course most of the time.

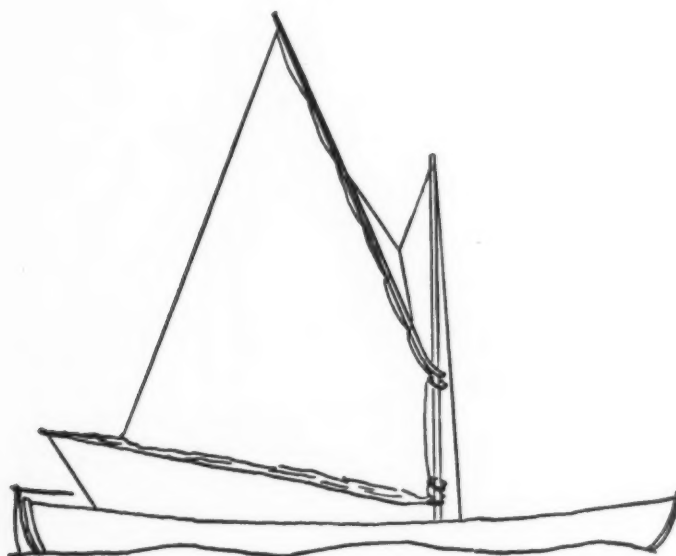


Fig. 5. Reefed gaff sail

A big whig (bull seal) will start sinking right away when killed. A large cow seal with pup inside will sink almost as quickly. A small seal might float for hours, even days; yet I have seen them sink; when shot in the body they seem to fill with water. For this reason, the three-pronged seventeen-foot gaff was carried. There was also a short single prong gaff used by the boatsteerer to pick up dead seal close to the boat when the hunter was busy with his guns.

The sealing boats used rowlocks. Tholepins would be too noisy, would break off or get lost. We had four pairs for each boat, all sennit covered

and well greased to make them quiet. Rowlocks were tied to the thwart rail by a length of cod line and when boarding the vessel and otherwise not in use the shank was jammed between the planking and the thwart rail so that they would not fall out if the boat was turned bottom up.

The boats were hoisted on deck by burtons, just like fishing dories. The painter, a three-quarter-inch manila rope some twenty feet long, was spliced into the stem-piece of the boat through a hole bored through the stem five or six inches below the stem head (Fig. 6), leaving a strop or eye a foot long to clear the stem head. Into that strop, next to the splice, was tightly seized a galvanized ring eye for the burton hook. A similar strop and ring eye were spliced to the stern post without a painter and long enough to clear the stern-post so as not to interfere with steering when the rudder was shipped.

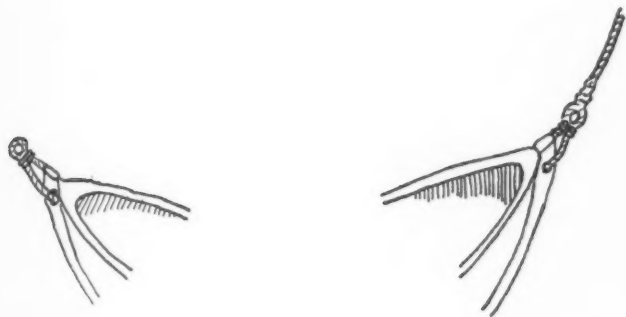


Fig. 6.

Burton strop aft is pulled forward over stern-post when rudder is shipped

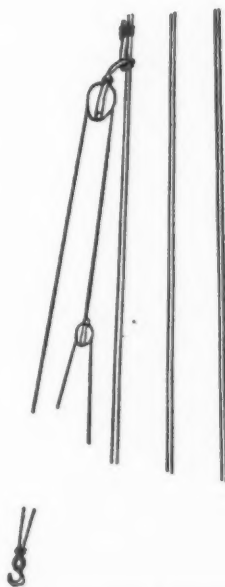


Fig. 7. Forward burton

Each burton had two blocks. A strong lanyard was spliced to the head blocks and securely seized to the after shroud on fore rigging and forward swifter on main (Fig. 7), some eight or ten feet below the cross-trees. One end of the burton rope (one-inch manila) was spliced to the pulley block; the free end was rove through the head block and pulled all the way until the two blocks were tight together. The bight of the burton rope was sent down about five feet under the water-line of the schooner and the hook seized securely to the bight. The free end was then rove through the

pulley block, and your burton was ready to hoist boats or anything else. They had to be long, as heavy seas or bad rolling sometimes put the boats almost under the bilge; it would not do to have the boat fetch up short with only one hook on.

When coming aboard, after a day's work on the sealing grounds, the first boat was served by the captain and cook. Before getting too close, the hunter took the shells out of his guns and lashed them down tightly in the gun rack. When alongside he threw the painter up to the captain, who usually stood forward. The captain made the painter fast and passed down the burton hook, which the hunter hooked into the strop. The cook and boatsteerer were doing the same thing aft. Both men in the boat then threw what skins they had in the boat up on deck, climbed on board, and rushed for the burton falls. The captain and cook meanwhile had kept a light strain on the burtons so the hooks would not come off.

They caught the boat on top of a swell and hoisted her in, letting her over easy and down on deck. Cook went back to his galley, and the rest of the boats were handled in the same way. The captain counted skins from each boat separately. All hands went below for supper and so will I.

Early Great Lakes Steamboats

The Ontario and the Frontenac

BY H. A. MUSHAM

WHILE much has been written about the early steamboats of the Great Lakes very little is based upon first hand information. Notes for this and following sketches are largely taken from the work of Captain James Van Cleve, who truly grew up with the steamboats. The Captain was born in Lawrenceville, New Jersey, 12 November 1808. His father, Aaron Van Cleve, went to western New York with Joseph Ellicott, as one of the party that cut the Western Transit Line through the Holland Company's tract in 1798. He located in Batavia County, in 1809, where he died on 7 February 1860. After the usual attendance at the district schools James Van Cleve was sent about 1821 to the Pioneer Academy of Western New York at Middlebury. He left Batavia on 9 May 1824 to seek his fortune in a business life and became a clerk in the store of N. Tryon and Company in Lewiston, New York. His situation was not very lucrative at the start, as he worked for nothing and clothed himself. Finding that he was (as he said) drifting on a lee shore financially, he entered in 1826 as clerk aboard the *Ontario*, the first steamboat on the Great North American Lakes, through the kindness of Colonel Samuel Dennison, managing owner.

From 1826 to 1860, he was connected with the shipping of Lake Ontario in various capacities, at times serving as clerk and captain of steamboats, and in promoting their construction. In 1840, while on a visit to New York City, he met Captain John Ericsson who was trying to introduce the screw propeller in the merchant service, and who offered him a half interest in his patent for all the North American Lakes if he would undertake to build a vessel and so equip it. He accepted this proposal, and the *Vandalia*, the first propeller on the Great Lakes, built by him and his associates, was put into service in November 1841. Her performance exceeded all their expectations and the new form of propulsion soon relegated side-wheels to a secondary position of importance. This is one of the first applications of the screw propeller in the merchant marine.

From the beginning of his career he kept notes on the vessels on which he served and others, which he, an accomplished artist, reduced to crayon and water-color sketches. At the solicitation of Captain E. P. Dorr and of the Historical Societies of Buffalo and Oswego he arranged them in a manuscript volume of which he made four copies. He presented one to each of the societies, another to Captain Dorr. The fourth later became a part of the Charles F. Gunther Collection which was purchased by the Chicago Historical Society.*

This book of large ledger size, with text lettered in hand by the Captain, and generously illustrated sketches of early steamers, sailing vessels and landmarks on the shores of the Lakes is a beautiful piece of work.

Captain Van Cleve was a man of energy, capacity and vision and maintained his interest in the Lakes until his death at Sandwich, Ontario, in 1888.

As his data on the early vessels is not always complete, recourse has been made to other sources to fill it out as far as practicable. A fairly complete picture is the result.

The St. Lawrence River and Gulf and the Great Lakes are the natural avenues of penetration to the interior of North America from the east. The Indians knew this long before the first white men landed on the shores of the Gulf in search of a route through the continent to the Pacific and China. It was by means of this route that the early French explorers were able to open up the interior and push their explorations on to the Gulf of Mexico and the Rockies, though it was not until after the French and Indian War that the British finally realized its importance. The Americans understood it, and, through the astute diplomacy of Benjamin Franklin and John Adams in the negotiations for the Treaty of Paris secured the median line of the St. Lawrence south of the forty-fifth parallel and of the Great Lakes for the greater part of their northern boundary. The eastern part of this line cut them off from access to the sea. It was not until 1795 that they came into full possession of their side of the line and their right to the free navigation of the Great Lakes and the St. Lawrence above the rapids. The British however flatly refused them the use of the river north of the boundary and of the Gulf and so closed the eastern gateway to them and to their own detriment.

The most important theatre of operations in the War of 1812 was also this waterway and Perry's victory on Lake Erie decided that the control

* The author wishes to acknowledge his indebtedness to the Chicago Historical Society for permission to make use of its copy of the Captain's Reminiscences and to reproduce his sketches of the early steamboats of the Great Lakes.

Northwest Territory was to remain American. Had the war not ended early in 1815, it is likely that the fate of western New York and northern New England would have been decided by a great naval battle on Lake Ontario, for which both sides had worked assiduously for three years, preparing strong fleets.

In those days Canada did not produce enough food to feed its people and relied largely on American imports for its needs. It has been said that the war would have ended much sooner had it not been for the food sent across the border by the Americans. With the coming of peace in 1815 there was an open resumption of this trade, and a movement into the Lakes country, settlers being attracted by the stories of the richness of the lands to the west told by soldiers and sailors on their return home. The opportunity to share in this movement was not neglected by those interested in shipping.

The construction of the fleets on Lakes Erie and Ontario brought a large number of ship carpenters and other artisans to Erie and Sacketts Harbor, the depots on the American shore, and to Kingston and York (now Toronto) on the Canadian, and the accumulation and manufacture of large amounts of shipbuilding material and supplies. With the peace numerous officers and men well trained by the war became available for employment.

When such an opportunity exists, men are usually on hand to make the most of it. Shipbuilding for the merchant service was immediately resumed, and as the steamboat had already proven its practicability on the Hudson, the Mississippi and Lake Champlain, naturally their thoughts turned to it. The steamboat however was not new to the St. Lawrence. It is of record that a small one, the *Dalhousie* was built at a cost of £2,500 at Prescott on the Canadian side, near the head of the first rapids, in 1809, and used on its upper reaches. Whether she made a trip on Lake Ontario is not known, though it is possible. Another, the *Accommodation*, was built at Montreal in 1809 by the Honorable John Malson and fitted with engines made in that city. She reached Quebec on her first trip down river on Saturday, 4 November 1809. Two other steamers, the *Swiftsure* and *Malsham* had also been built at Montreal, the former in 1813 and the latter in 1814. Still another of 500 tons burthen was launched there in the fall of 1815.

In the months immediately following the declaration of peace in February 1815 two companies, one Canadian and the other American, were organized to avail themselves of the opportunity for steamboat navigation on Lake Ontario. The Canadian, the first to get under way, was

formed at Kingston in the spring of 1815 with the following prominent merchants of that city as shareholders: Joseph Forsyth, John Kirby, Thomas Markland, William Mitchell, Henry Murneg, Lawrence Herchmer, Marsh and Yeoman, to build a steamboat to cost £12,000, which was to be well fitted up and to be propelled by side-wheels driven by a 50-horsepower engine.¹ Advertisements in the newspapers for tenders were answered by a Scotsman named Burns and Henry Teabout, an American, who in partnership with James Chapman and William Smith had recently built a schooner, the *Woolsey* and another sailing vessel, the *Kingston* at their yard at Sacketts Harbor.² Teabout and Chapman, both young men had been foremen under Henry Eckford of New York, who had constructed the ships for the United States Navy at that place during the war. Teabout's proposal was accepted and he spent several days looking for a suitable site on the Canadian shore near Kingston. He finally chose Finckle's Point or Tavern at Ernesttown (on one of the reaches of the Bay of Quinté, eighteen miles up the lake from Kingston), because of the gravelly nature of the beaches there. The company ordered the engine from Boulton and Watt of Soho, Birmingham, England.

The American company was organized soon afterwards and at first included Major General Jacob Brown, U.S.A., Commodore M. F. Woolsey, U.S.N., Jacob Warring, Hooker and Crane and Elisha Camp of Sacketts Harbor, Eri Lusher of Ogdensburg, Charles Smyth, Abram Van Santvoord, David Boyd and John I. De Graff of New York.³ The company first had to come to terms with the heirs of Robert Fulton and Chancellor Robert R. Livingston, owners of the right and privilege to the monopoly of navigation by steamboats of the waters of New York granted to them by the state legislature. This probably delayed matters considerably, but an agreement was drawn up on 2 January 1816, between Harriet Fulton and William Cutting of New York, executor of Fulton and Livingston, and Edward P. Livingston, on the one hand, and Charles Smyth, Joseph C. Yates, Thomas C. Duane and David Boyd, on the other, by which they secured the sole right to navigate boats or vessels (vessels of war excepted) by steam on all or any of the waters of Lake Ontario, within the State of New York and the full and entire and exclusive right of employing in the

¹ Brigadier General A. E. Cruikshank, 'Notes on the History of Shipbuilding and Navigation on Lake Ontario up to the time of the launching of the Steamship *Frontenac* at Ernesttown, Ontario: 7th September, 1816,' *Ontario Historical Society, Papers and Records*, XXIII (1926), 40.

² *History of the Great Lakes, Illustrated in Two Volumes, Volume I* (Chicago, J. H. Beers, 1899), 586.

³ James Van Cleve, *Reminiscences of Early Sailing Vessels and Steam Boats on Lake Ontario, History of the Introduction of the Propeller on the Lakes and Other Subjects with Illustrations* (MS., fol., Chicago Historical Society, Chicago, Illinois), 77.

navigation of the same waters, such inventions and improvements in the navigation of boats by fire or steam, to which the grantors or any of them had or hereafter might have right or title by patent. Only one boat was to be employed on any route to be established without the consent of the grantor or until the net proceeds of one boat should exceed twenty per cent per year. One boat was to be built within two years. The grantees paid down \$10.00 in cash and agreed to pay one half of all money received above twelve per cent after deducting \$1,500.00 from the gross returns, which was to be paid into a fund, which on reaching \$12,000.00 was to be used for rebuilding the boat. Any privileges for the navigation of the lake secured from the British government were to be shared equally. Application was to be made to the State of New York for the incorporation of the Ontario Steamboat Company with a capital of \$200,000.00.⁴

On 16 February 1816, a petition from Charles Smyth, David Boyd, Eri Lusher, Abram Van Santvoord, John I. DeGraff and associates soliciting an act of incorporation for the Ontario Steamboat Company, was passed by the legislature but did not become law because of its early adjournment. On 16 August, Eri Lusher and Charles Smyth took over the interests of DeGraff and Boyd. Work was commenced on the proposed boat at Sacketts Harbor sometime in the late summer of the year.⁵

The Canadian company, taking its cue from the Fulton monopoly, presented a petition signed by Thomas Markland and others to the Provincial House of Assembly requesting that, as it was building a steamboat for use on Lake Ontario, all foreign vessels be prohibited from the Canadian coastal traffic and a monopoly of steam navigation from Prescott to Queenstown for a short term of years be granted.⁶ It followed this with another petition citing the evils of free trade across the lake and asking that the introduction of American vessels in the trade be stopped and that all such be required to pay tonnage dues.⁷ The race for the shipping business of Lake Ontario and the Upper St. Lawrence was now on.

Teabout and Chapman started work on the Canadian boat in October 1815 at Finkle's Tavern. Considerable delay was experienced in the selection of the timbers, some of which were brought from New York, as were some of the shipwrights. Construction was slow and it was not until late in the following summer that it was ready for the water. Part of this delay may have been caused by the non-delivery of the engine, held up probably by the ice in the St. Lawrence. She was named *Frontenac*, after the county in which she had been built, and launched with engines in-

⁴ Van Cleve, op. cit., p. 75. Beers, op. cit., p. 587.

⁵ Beers, op. cit., p. 587. ⁶ Cruikshank, op. cit., p. 40.

⁷ Cruikshank, op. cit., p. 40.

stalled,⁸ on 7 September, in the presence of a large crowd. A sudden rain-storm held up the ceremony for a time, the people taking shelter in the tavern. When it cleared, the *Frontenac* was put into the water with much cheering.⁹

The *Frontenac* was then sailed down to Kingston for fitting out. Her dimensions were:¹⁰

Length on deck	170.0	feet
Length on keel	150.0	"
Length for tonnage	160.0	"
Beam	32.0	"
Depth of hold	13.67	"
Designed draft	8.00	"
Tonnage ¹¹	700.00	

About the time the *Frontenac* was launched, the *Kingston Gazette* observed: 'A steamboat was lately launched at Sacketts Harbor. . . . The opposite sides of this lake, which not long ago vied with each other in the building of ships of war now seem to be equally emulous of commercial superiority.' The exact date of this launching is not known, but on it *Niles Weekly Register* for 19 October, remarked, 'We lately mentioned the launch of a steamboat at Sackett's Harbor, a second for Lake Ontario has been launched at Enest, N. Canada.'

This boat, the *Ontario*, was that being built by the Lake Ontario Steamboat Company. Her construction offered no real difficulties because of her small size and because the Navy Department of the United States had generously supplied a sufficiency of timber for a reasonable sum. The hull was modeled on that of the *Sea Horse*, 71 tons,¹² then running on the East River, New York. Her dimensions were:¹³

Length on deck	140.0	feet
Length from stem to stern post	110.0	"
Length for tonnage	125.0	"
Beam	24.0	"
Depth of hold	8.5	"
Draft	6.0	"
Tonnage (Monson's Rule)	237	tons

⁸ One of the first instances of launching with engines installed.

⁹ Cruikshank, op. cit., p. 42. Beers, op. cit., p. 587.

¹⁰ Van Cleve, op. cit., p. 77.

¹¹ Monson's Rule (1642). Tonnage = $\frac{\text{Length} \times \text{Breadth} \times \text{Depth}}{100}$

¹² Van Cleve, op. cit., p. 75.

¹³ Van Cleve, op. cit., p. 77.

She was completed in the winter following. She was schooner-rigged with two masts and three sails. The tiller was placed in the open on the overhang of the stern. The side-wheels, 11.33 feet in diameter, were driven by a low pressure beam engine, built by James P. Allair of New York. It had a single cylinder, 34 inches diameter with a 4-foot stroke. There were two wood burning boilers without return flues which headed into a single smoke pipe.¹⁴ The cost is estimated at about \$50,000.00.

On 29 March 1817, *Niles Weekly Register* commented: 'The steamboat *Ontario* capable of carrying 2,000 barrels, is prepared for the lake and will leave Sackett's Harbor every Monday, and make a rout from Ogdensburg to Niagara stopping at several places to land freight or receive passengers. The fare for cabin passengers from Sackett's Harbor to Ogdensburg is \$5.— from the same to Niagara \$10.'

The *Ontario* was enrolled for service at the Sacketts Harbor Customs House on 11 April, and a few days later left for Oswego on its trial trip under command of Captain Francis Mallaby, formerly a master in the United States Navy. On arrival at Oswego she was greeted by a huge crowd and demonstrations of great joy. To the little shipping port this steam-propelled vessel brought visions of greatly increased lake trade and future prosperity. A celebration which lasted all night with bonfires, illuminations and speeches was staged in honor of the great event. Residents of the neighboring villages and settlements made it a holiday coming from all around for a day of excitement.¹⁵ On the morning of the second day she left Oswego for the Genesee River, and reached there in the evening, where she remained over night resuming her way up the lake the next morning. Soon after leaving the Genesee, she ran into a northeast blow which raised considerable swell. Like all steamboats previously built for running on still water, the boxes or bearings under the ends of the shaft were considered sufficiently safe by the weight of the shafts and wheels to hold them in place without the necessity of bolting caps upon those supporting the out-ends of the shafts to the bed timbers. The action of the waves soon lifted the shafts from the out-end boxes and the wheel coverings were at once torn in pieces by contact with the wheels which were also considerably damaged. Upon the occurrence of this disaster the boat put about and returned to Sacketts Harbor to repair damage and secure the shafts by bolting caps upon the boxes. On this trip a speed of five miles an hour was attained.¹⁶

¹⁴ Van Cleve, op. cit., p. 77.

¹⁵ Leon N. Brown, *Commodore Melancthon Taylor Woolsey, Lake Ontario Hero of the War of 1812* (Oswego, N. Y.: Oswego Historical Society, 1941), pp.151-152.

¹⁶ Van Cleve, op. cit., pp. 77-78.

On 17 May, *Niles Weekly Register* again observed: 'The steamboat built at Sacketts Harbor, succeeds on Lake Ontario according to specification.'

Repairs completed she was put on a regular weekly schedule between Queenstown and Ogdensburg. This being too much for her it was changed on 1 July, to a ten days' schedule. The following rates were charged:

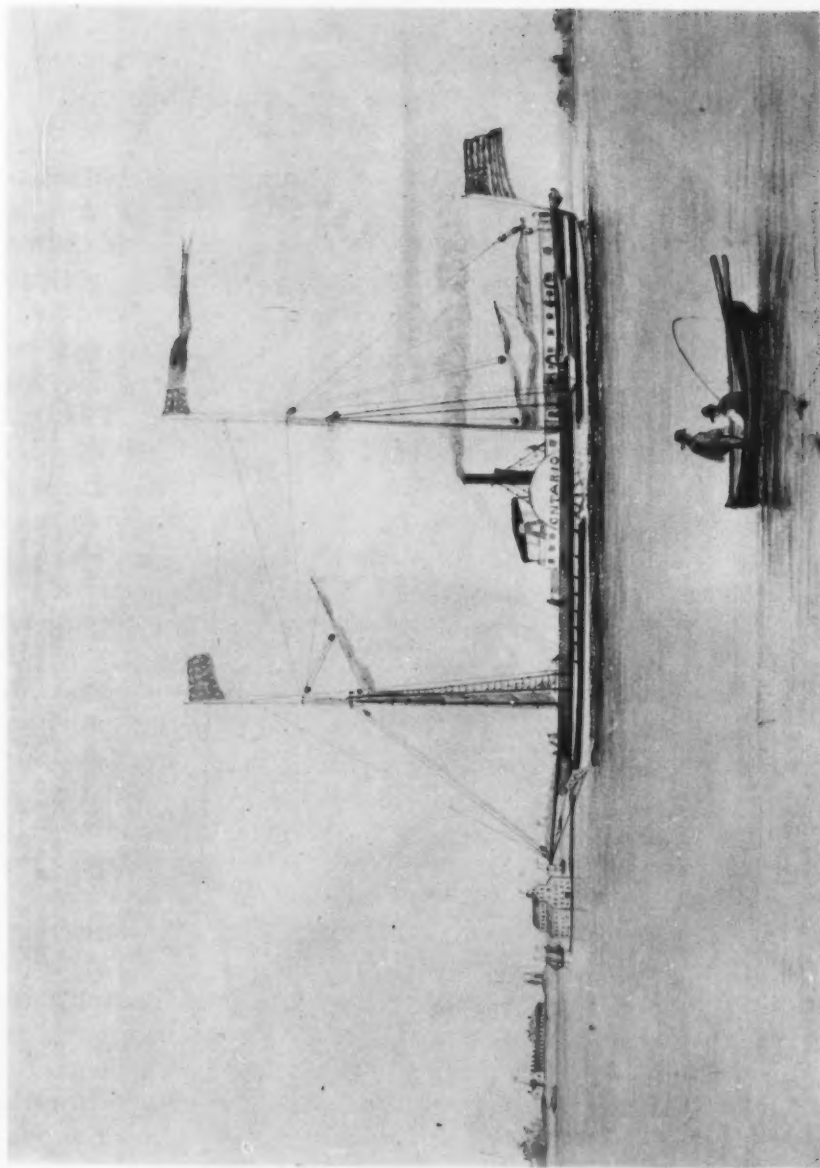
Niagara to Genesee River	\$4.00
Genesee River to Ogdensburg	\$5.00
Sacketts Harbor to Ogdensburg	\$5.00

Meanwhile the *Frontenac* was slowly being completed in Kingston. On 23 May, she was moved over to the government dock at Point Frederick to have a suction pipe installed. The *Kingston Gazette* reported: 'she moved with grandeur against a strong head wind.' On 30 May, she left for the Bay of Quinté to take in wood. A fresh breeze was blowing against which she proceeded swiftly and steadily to the admiration of a great number of spectators. She was a handsome ship, schooner-rigged with three masts.¹⁷ The boilers burned wood and she had one smoke stack. The paddle-wheels were 12.75 feet in diameter. The final cost was £15,000. The exhaust of her high pressure engine made a terrible, hoarse noise which frightened many people. With all sails set and a fair wind she could make nine knots. Her first commander was Captain James McKenzie, formerly master in the Royal Navy, who had served under Sir James Yeo in the operations on the lake during the war. He commanded her during her entire service.

A miscalculation, however, had been made either in weight or in the hull form, because, when fully loaded with wood and freight, the draft was ten feet instead of the eight as planned. It was therefore very doubtful that she could run past the Thousand Islands to Prescott, the eastern terminus of the route. The attempt was made and on this first and only trip down river she ran aground on a shoal near Alexander Bay. On release she returned to Kingston and the service was thereafter confined to Lake Ontario. That shoal has since been known as Frontenac Shoal.¹⁸ Kingston at the east end of Lake Ontario was then made the east end of the run. At first sailings were announced for the first and fifteenth of each month as punctually as the nature of navigation on the lake would permit. The fares were:

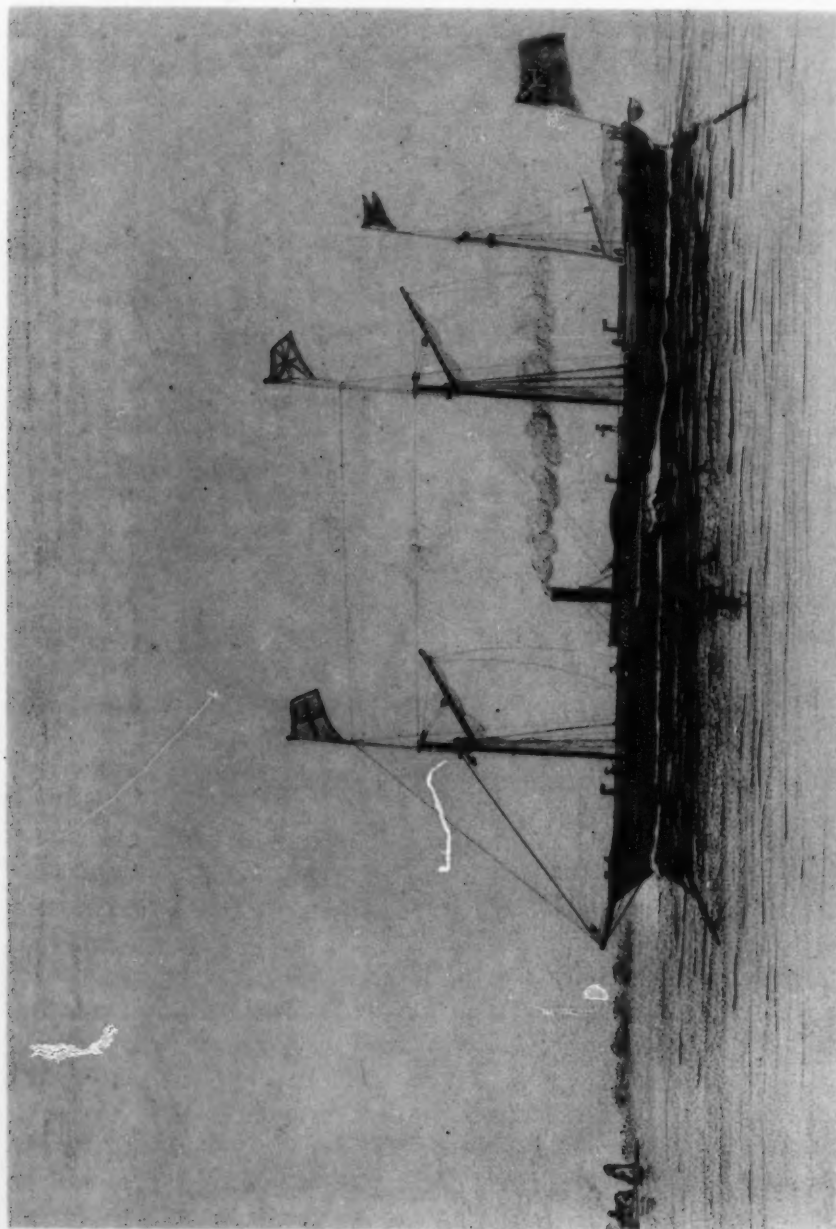
¹⁷ A model of the *Frontenac* was believed to have been in existence in 1878. It may still be.

¹⁸ Van Cleve, op. cit., p. 51. Henry Scadding, *Toronto of Old, Collections and Recollections illustrative of the Early Settlement and Social Life of the Capital of Ontario* (Toronto: Willing & Williamson, 1878), p. 539.



Steamboat *Ontario* approaching Sackett's Harbor, 1826

Painted by Captain James Van Cleave from a sketch made by him when clerk on board of her in 1826. Reproduced by permission of the Chicago Historical Society. The hull was painted white with two black stripes and a gray water line. The deck house was white and the rail green. The boats were white with red and green stripes. The side-wheels were red; the walking beam and smoke pipe black. The stem and transom were ornamented with gold scrolls.



Steamboat *Frontenac* on Lake Ontario, 1827

Painted by Captain James Van Cleve from a sketch made by him in 1827. Reproduced by permission of the Chicago Historical Society. The hull was painted black. The smoke pipe was black. The rail was green. The boats were white with red and green stripes. The side-wheels were red.

Kingston to Ernesttown	5s.
Kingston to York and Niagara	3s.
Kingston to Burlington	£3 15s.
York to Niagara	£1
Children under three	half price
Between three and ten	two thirds

Each ticket allowed transport of sixty pounds of baggage with surplus at usual rates. Sleeping accommodations were provided and passengers could choose their berths. Gentlemen's servants were not allowed to eat or sleep in the cabin. Deck passengers paid 15s. and could either bring their provisions or purchase them from the steward. For each dog brought on board the fare was 5s. For each small package, 2s. 6d. was charged and for each barrel of freight, 4s.¹⁹

The *Frontenac* having been well broken into service, the schedule was stepped up to three trips a month in 1819, sailings being made from Kingston on the first, eleventh and twenty-first, from York for Queens-
ton on the third, thirteenth and twenty-third and from Niagara for Kings-
ton on the fifth, fifteenth and twenty-fifth.

As the steamboat was a wood burner and the fuel along with the boilers and engine took up considerable cubic capacity, the owners had asked the Provincial Assembly on 11 February 1818, for a reduction of 3d. per ton Lighthouse Tonnage Duty, which was granted. Three years later they asked for a remission of duty on all such space and secured it.²⁰ This is probably one of earliest, if not the first act allowing tonnage reductions for machinery space.

The *Frontenac* was a favorite with the public and ran successfully for some years. Due to her deep draft, the shallow bars across harbor entrances and the lack of good charts, she had grounded several times, necessitating layups for repairs that were costly. Announcement was made in the *Loyalist* of 26 May 1827 that she was laid up and that Captain McKenzie had made arrangements for a new boat with an engine of greater power than in any boat on the lake to succeed it.²¹ The Erie Canal that was opened for service on 25 October 1825 may have had a great deal to do with the retirement of this noteworthy steamer. The canal brought about a shift of transportation routes that made New York the greatest port of the country. Had the St. Lawrence been open to free navigation this probably would not have occurred.

¹⁹ Scadding, op. cit., p. 539.

²⁰ Cruikshank, op. cit., p. 43.

²¹ Scadding, op. cit., p. 555.

She was advertised for sale at public auction on 2 July 1827, in the *Loyalist* for 9 June, 'as she lays with anchors, cables and rigging.' The sale was to commence at 10.00 A.M. and application was to be made to Mr. Strange or John Hamilton of Queenston.²² It is not likely that the sale took place, for on 1 September the *Loyalist* reported as copied from the *Upper Canada Herald* that; 'yesterday the old *Frontenac* under the care of R. Hamilton Esq. left Kingston for Niagara, where we understand she it to be broken up. Mr. Hamilton is gathering new materials for a new boat of 300 tons.'²³ Some time during the month she was set on fire, either carelessly or by incendiaries. When the mooring lines burned or were let go, she drifted some distance out on the lake where she was met by Captain Mosier of the *Niagara* who took her in tow and succeeded in bringing her into the wharf where after some exertions the flames were extinguished.²⁴ The owners, Messrs. Hamilton, offered a reward of £100 for information leading to the discovery and apprehension of the incendiaries, but without result. The engine was then removed and later placed in the *Alciope*. Her hulk was then set on fire and burned and the charred remains were sunk in the Niagara River along the east bank about halfway between the ship and the old ferry house.²⁵ And so ends the story of the *Frontenac*, the first Canadian steamboat on the Great Lakes.

The *Ontario* continued in service and with about the same luck. When under command of Eri Lusher in 1821, she stranded on entering the port of Oswego and remained several days in a perilous position before being released. She had several changes of owners and captains in her career. In 1823, Captain Robert Hugunin of Oswego commanded her, in 1830, Captain Miller. Captain Daniel Reed of Sacketts Harbor and Captain Peter Ingalls also were her commanders for a time. Patrick Wallace was her mate for many years. In 1824 she was owned by Jesse Smith of Smithville in Jefferson County and Luther Wright of Oswego was captain and clerk while a man named Hawkins from Henderson in the same county, who later became a judge, was sailing master. In the fall of that year Smith sold her to L. & S. Dennison of Sacketts Harbor, Enos Stone and Elisha Ely of Rochester. Two years later James Van Cleve of Lewiston, a youth of eighteen, became clerk and served until 1829.

In 1826 the *Ontario*, while under command of Captain William Vaughn, formerly of the United States Navy, had another accident, grounding on a shoal while passing up the St. Lawrence among the

²² Scadding, op. cit., p. 555.

²³ Scadding, op. cit., p. 556.

²⁴ Scadding, op. cit., pp. 555-556.

²⁵ Van Cleve, op. cit., pp. 51-52.

Thousand Islands. The speed being low she was soon released. No damage was done but an anchor was lost.

During the winter of 1827-1828, the square engine then in the steamboat *Martha Ogden* which belonged to the same parties, was transferred to the *Ontario* at Hanford Landing on the Genesee River, with the hope of increasing the speed. For some reason unknown the increase in power did not materialize nor was anything added to her comfort as a passenger boat.

In 1829 the *Ontario* when under command of Captain Hitch, an old whaler of New Bedford, came to anchor about twenty-five miles below the Niagara in the hope that she would ride out a severe gale and thus save the distance made up the lake. After holding a part of a day and through one night, she began to drag the anchor. To avoid going on shore, being in four fathoms of water, the cable and anchor were slipped and they probably remain in that spot for the fish to sharpen their teeth on.²⁶

In 1832 the *Ontario* after fifteen years of hard service passed out of service and was hauled out of the water and broken up at Oswego. And so ended her notable career.

In these early days engineers were few and far between. Feeling the importance of their position they became temperamental and had to be humored. They sometimes tyrannized over the captain and crew and governed the movements of the boat. John Lays, the engineer of the *Frontenac*, was not very tractable and her departures were made according to his will. Jock was long a well-known character in York.²⁷

Mr. Ramsey was for many years first engineer on the *Ontario*. In those days signal bells for working the engine had not come into use. A boy was stationed near the engine to pass the word from the captain to the engineer. So it became a byword on the lake; 'Stop her Mr. Ramsey'—'Back her Mr. Ramsey'—'Go ahead Mr. Ramsey'—and at times when the boat did not readily come up to the dock some wag would sing out—'Give her a stroke sideways Mr. Ramsey.'²⁸

Both of these steamboats were ambitious undertakings when the sparsely settled condition of the shores of Lake Ontario and the western country is considered. The *Frontenac* was, with the possible exception of H.M.S. *Superior*, built at Kingston during the war, the largest vessel built on the Lakes for about twenty years. Her draft limited her service to the deep water of the lake and deprived her of a large part of the income

²⁶ Van Cleve, op. cit., pp. 75-79.

²⁷ Scadding, op. cit., p. 556.

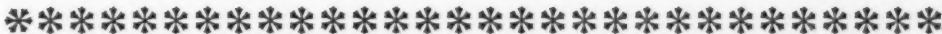
²⁸ Van Cleve, op. cit., p. 77.

necessary to operate so large a craft; revenue which would have come to her had she been able to make her eastern terminus at Prescott, where through travelers took ship after portaging the rapids of the upper St. Lawrence. As she was too large for the service of that day the operation costs must have been correspondingly high.

On the other hand the *Ontario* with her light draft and smaller size was not so handicapped. Even then the frequent changes of owners indicate that she too was not the complete success so confidently expected by her projectors.

It is evident there was a race between the American and Canadian companies to be the first to use the steamboat on the lake. There has been considerable argument as to which of the two boats was really the first. From what has been said here it is plain that while the *Frontenac* was the first boat projected and work was started on its construction first, the *Ontario* was the first to be launched and the first to make a trip on the lake. It is likely, however, that the *Frontenac* was the first steamboat to go into regular service.

It may be that even the claims of both the *Ontario* and the *Frontenac* to priority may be successfully challenged in the future by the disclosure of information proving that the *Dalhousie* previously referred to, made a trip to and on Lake Ontario long before either the *Ontario* or *Frontenac* were conceived. Be this as it may, it is apparent that from what has been stated here that the honor of being the first steamboat to navigate the Great Lakes belongs to the *Ontario*, and that great credit must be given to the men who promoted and built it as well as to those who promoted and built the *Frontenac*. They both were fine achievements.



Notes

A SEVENTEENTH-CENTURY GERMAN SUBMARINE

JUST as the first modern German submarine, the Krupp-Germania model of 1905, was designed by d'Equivilley, a French engineer, so the first German submarine of which there is any record was also built by a Frenchman, Denis Papin. Papin, who was born at Blois on 22 August 1647, was one of the innumerable reputed inventors of the steam engine, and is also supposed to have invented a 'steam-carriage' as well as a steamboat. However, it is his submarine which merits our attention, for neither the *Encyclopaedia Britannica* nor the *Dictionary of National Biography* mentions Papin's submarine and many writers on submarine warfare (notably Fyfe, Burgoyne, Bishop, Hoar, and Low, ignore him completely, while others, such as Sueter and Field, mention him but briefly.¹

After receiving his degree as doctor of medicine from the University of Angers in 1669, Papin devoted himself to the study of natural philosophy and mechanics, on which subjects he wrote several scientific tracts. In 1675, he left Paris, where he had been assistant to Christiaan Huyghens, the Dutch mathematician, astronomer and physicist, to become the collaborator of Robert Boyle, and later of Robert Hooke, in their experiments at the Royal Society

¹ H. C. Fyfe, *Submarine Warfare* (London, 1902); A. H. Burgoyne, *Submarine Navigation* (London, 1903); F. Bishop, *The Story of the Submarine* (New York, 1916); Allen Hoar, *The Submarine Torpedo Boat* (New York, 1916); M. F. Sueter, *The Evolution of the Submarine Boat* (Portsmouth, 1907); C. Field, *The Story of the Submarine* (Philadelphia, 1908); A. M. Low, *Mine and Countermine* (London, 1940).

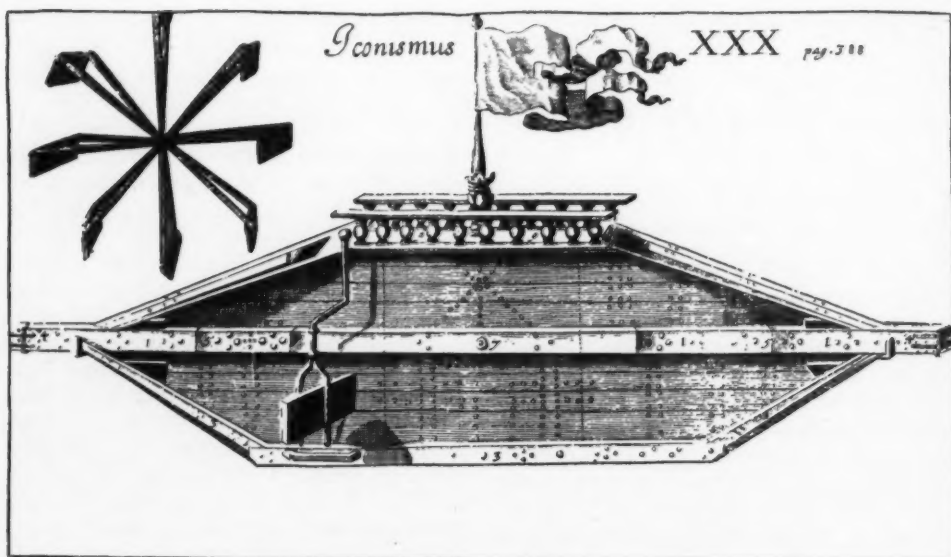
in London. Sixteen years later, after sojourns in Paris, London and Venice, we find Papin, now a Fellow of the Royal Society and Professor of Mathematics at the University of Marburg, assisting the Landgrave of Hesse-Cassel, a scientific dilettante, in making experiments of various kinds. It was at Cassel, and for his patron, the Landgrave Charles, that Papin constructed his submarine.

Three of Papin's contemporaries, Borellius, Ciminus, and Doligny day-dreamed about sailing under water in a boat, but Papin shares only with Cornelius Drebbel the distinction of having actually made a submarine. Drebbel's craft, which was little more than a heavily ballasted rowboat, covered with greased leather to make it water-tight, was submerged by means of oars. Although it is claimed that in 1625 she made a submerged voyage at a depth of 15 feet in the Thames it is quite likely that the boat was capable of nothing more than short porpoise-like dives.²

The life of a French engineer named de Son spans the period between Papin and Drebbel; de Son's invention, a large semi-submarine evidently intended to be used against the British fleet, inspired an effusion that is typical of the seventeenth century:

'The Strange Ship built at Rotterdam A' 1653, the inventor of it doeth undertake in one day to destroy a hondred Ships, can goe from Rotterdam to London and back againe in one day & in 6 Weekes go to the East Indiens, and to run as Swift as a bird can flye, no fire nor Storme, or Bullets, can hinder her, unlesse it please God. Although the Ships meane to bee safe in their havens, it is in vaine, for she shall come to them in any place, it is impossible for her to bee taken, unlesse by treacherie, and then can-

² W. B. Rye, *England as Seen by Foreigners in the Days of Elizabeth and James the First* (London, 1865).

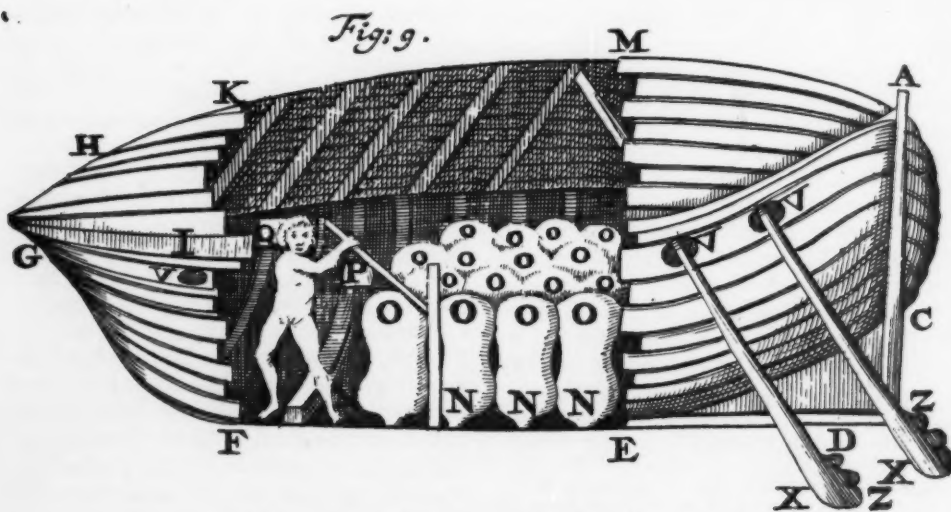


De Son's semi-submarine, 1653

From Schotti's *Technica Curiosa*

The paddle-wheel, shown at left, operated in a well in the center of the vessel

Courtesy of the New York Public Library



Giuseppe Borelli's proposed submarine, 1679

From *De Motu Animalium*

Courtesy of the New York Public Library

not be governed by any but himselfe, the length is 72, the height 12 foote, and the breadth 8 foote.³

Her wooden hull, oblong amidships and wedge-shaped at the ends, was reinforced with iron and she had two cabins, one fore and one aft, 'the air in which

lections (London, 1679), writes of Joseph Borellius' proposed 'way to make a submarine vessel, whereby several persons may pass together from place to place under water, accommodated with two ways to move to and fro, and to make it rise and sink in the water, etc.' Borel-

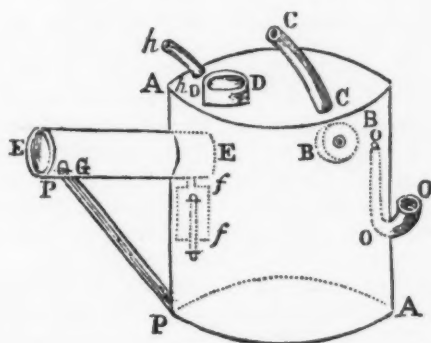


Diagram of Denis Papin's submarine, 1691

From *The Gentleman's Magazine*, December 1747

Courtesy of the New York Public Library

remained good for three hours or so.' A heavy beam, the head of which was armoured, projected several feet beyond the bow; a similar beam jutted out from the stern. Her designer intended that she be run with decks awash and that she ram her adversaries. She was to have been propelled by a paddle-wheel operating in a well in the centre of the vessel, but the clockwork mechanism to which it was connected was too feeble even to revolve the wheel, much less drive the craft 'in 6 Weekes to the East Indiens.' Despite the flamboyant description and her name, *Fulmen Maris*—Thunderbolt of the Sea—the boat never succeeded in sinking so much as a shallop, and de Son ended his career showing her to the curious for a few coppers.

Robert Hooke, in his *Philosophical Col-*

lius' boat is important mainly because of the originality of his proposed method of regulating her displacement. After studying the anatomy of a fish, he came to the conclusion that the function of a fish's swim-bladder could be mechanically reproduced in a submarine by the use of numerous leather bottles fitted inside the hull, each one with its mouth open to the water. He intended to submerge his boat by allowing these crude ballast tanks to fill, and to bring her to the surface by using a lever to squeeze the water out of each bottle, after which its neck was to be bound up.⁴ While Borellius' idea was impracticable, it was a step in the right direction.

On 25 November 1685, Joseph M. Ciminius, a Neapolitan Jesuit, wrote to Louis XIV offering him an invention

³ G. L. Pesce, *La Navigation Sous Marine* (Paris, 1906), p. 137. See also, P. Gasparis Schotti, *Technica Curiosa Sive Mirabilis* (Herbipoli, 1687), 'Navis Roterodamensis,' pp. 387-390.

⁴ Joseph Borellius, *De Motu Animalium* (Rome, 1680). Propos. CCXXIV, p. 363, vide *The Gentleman's Magazine* (London, 1750), XX (June 1749), 249.

that would 'enable men, and even armies, to rise and descend to the bottom of the sea, fully armed, their hands and feet at liberty, to stay there, sit down, walk and run for several hours at a stretch, or even for a whole day.' He says that by the aid of his device, which, from the above, appears to have been a diving helmet rather than a submarine, seaports could be easily captured and the enemy's fleets burnt by means of fireships guided from beneath the surface.⁵

In 1688 the King of France received a letter from Roger Doligny, another closet scientist who worked out his plans on paper but never carried them into the sphere of reality, who wished to interest the King in 'a machine for travelling and working under water without inconvenience,' which, the inventor said, could carry several days' provisions for her crew of three or four and would be extremely useful in naval warfare, removing harbour obstructions in enemy ports, blowing up bridges and sinking warships. Unfortunately, no description of the invention is extant.⁶

The British patent office records disclose that in 1691 a patent for a submarine was granted to Sir Stephen Evance, but nothing more than that is known of the vessel.

In the same year Dr. Papin took Drebbel's submarine as a model and attempted to improve upon it. He succeeded only to a certain extent. The result of his labours was 'a wooden tub of an elliptic or oval figure, 6 feet in height and as many in the greater diameter, and 3 feet in the lesser,' the bottom of which was heavily ballasted so that the boat maintained a vertical position when submerged. The crew entered her through a water-tight hatch in the deck. Like Drebbel, Papin ventilated his submarine by means of a leather tube, the upper end of which floated on the surface and down which fresh air was

sucked by a centrifugal pump. The ballast tanks, or 'internal vases,' as Papin termed them, were emptied by being pumped full of air. Papin also fitted his craft with a mercurial depth gauge and illuminated her by means of glass ports; moreover, he was the first inventor to recognize the value of positive buoyancy in a submarine: 'To prevent the ship from being quite sunk by letting in too much water, two men ought always to be trying to degress it by the help of oars, and when they find that it can be done without too much stress,' the water is to be shut off, 'by which means the ship will be for any space of time lighter than water, and yet may, by means of the oars, be depressed more and more at discretion. The oars are to come through lateral holes which are most exactly closed by leather bound round them, as, we are told, was also practiced in Drebbel's ship.' Sticking out at a right angle from the upper part of the hull was 'a great cylindrical copper vessel, 6 foot long and a foot and a quarter in diameter,' which was closed at both ends 'in the most exact manner, with plates fitted for the purpose, and screw'd very tight.'⁷ According to Papin, after a man had shut himself up in the tube, the air pressure in the chamber was increased until it equalled the pressure of the water, at which time the outer plate could be unscrewed and a torpedo attached to the keel of an enemy vessel. It is hardly necessary to remark that if anyone had tried to do that he would have been blown right out of the tube. While Papin's depth gauge and ballast tanks were unique, he was no naval architect and it is difficult to imagine a more unwieldy craft than his submarine. She was irreparably damaged by the collapse of the crane with which she was being launched; Papin's friend, the Landgrave, gave him money to build another. This submarine was exactly like the first, and although she was never

⁵ Field, p. 30.

⁶ Ibid.

⁷ *Gentleman's Magazine*, XVIII (December 1747), 581.

used in war, in the year 1692 she made at least one submerged voyage in the river Fulda. 'The experiment,' says F. M. Feldhaus, 'was a complete success, but landlocked Hesse had but little use for his submarine boats.'⁸

In the early part of the eighteenth century Denis Papin turned up in London, where *circa* 1712, he died—alone, penniless and in such obscure circumstances that not even the exact date of his death and his place of burial are known. However, in 1881 a bronze statue was erected in his honour at his birthplace, Blois, where a street is also named after him.

DAVID WHITTET THOMSON

THE LATER HISTORY OF AMERICAN SAILING-SHIPS 'SOLD FOREIGN'

PART VI

Vessels built at Baltimore, Maryland

Noble. Brig, 205 tons, built 1845, at Baltimore, Maryland.

Sold to Cape Colony 1860 renamed *Peri* [QKLH of Cape Town]. Later of Bombay, still afloat 1913.

Annapolis. Ship, 908 tons, built 1851 at Baltimore, Maryland, by N. A. Cooper.

Sold to Germany 1874 renamed *Auguste* [of Bremerhaven]. Sold to Norway 1886 renamed *J. Benham* [JCKL of Lillesand]. Out of Register 1890.

North Carolina. Bark, 638 tons, built 1853 at Baltimore, Maryland.

Sold to Canada 1864 renamed *Lydia* [VRHB of Yarmouth, Nova Scotia]. Stranded 20 November 1879 St. Lawrence shoal. On voyage Quebec-Clyde.

Fame. Bark, 310 tons, built 1854 at Baltimore, Maryland.

Sold to Norway 1877 renamed *Lord Baltimore* [HPLM of Brevig]. Abandoned at sea December 1897.

⁸ F. M. Feldhaus, 'Submarine Experiments of the Past,' *Scientific American Supplement*, LXVII (1909), 185.

Octavia. Bark, 309 tons, built 1857 at Baltimore, Maryland, by T. Abrahams.

Sold to Norway *c.* 1876 [HJSB of Holmestrand]. Foundered July 1890.

Clarissa Vera. Bark, 250 tons, built 1858 at Baltimore, Maryland.

Sold to Germany 1876 renamed *San Luis* [of Hamburg]. Sold to Norway *c.* 1888 [HFSJ of Drammen]. Dismantled 1911.

E. F. Thompson. Bark, 229 tons, built 1860 at Baltimore, Maryland.

Sold to Norway *c.* 1886 renamed *Sigrid* [HBPC Porsgrund]. Wrecked December 1897.

Talisman. Bark, 366 tons built 1860 at Baltimore, Maryland, by Cooper & Co.

Sold to Great Britain 1864 [WFSC of Liverpool]. Condemned January 1895.

Fannie Crenshaw. Bark, 255 tons, built 1861 at Baltimore, Maryland.

Sold to Great Britain 1864 renamed *Mary Bond* [WHMT of Liverpool]. Sold to Norway 1876 renamed *Astrid* [JPRM of Moss] and to Sweden 1903 [JLVQ of Halmstad]. Not in 1908 Register.

Johannes. Ship, 979 tons, built 1862 at Baltimore, Maryland, by Cooper & Slicer.

Sold to Germany *c.* 1873 [QBFP of Bremen] and to Norway *c.* 1892 [HCVS of Dröbak]. Wrecked 1902.

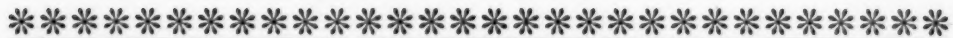
Suzie M. Jones. Ship, 991 tons, built 1863 at Baltimore, Maryland, by Cooper & Slicer.

Sold to Germany 1873 renamed *Laura & Gertrude* [QCDB of Bremen]. Sold to Russia 1894 renamed *Murtaja* [VDBH of Bremen]. Sold to Russia 1894 renamed *Murtaja* [VDBH of Raumo]. Out of Register 1904.

Yamoyden. Bark, 423 tons, built 1863 at Baltimore, Maryland, by Jones & Ashcroft.

Sold to Norway 1895 renamed *France* [JBNP of Fredrikshald]. In port damaged November 1911.

DANIEL R. BOLT



Documents

BEETLE WHALE BOATS

THERE has recently come to light in the manuscript files of the U. S. National Museum Library a portion of the work notes and manuscript of James Templeman Brown, one of the associate authors of the large and extensive publication of the United States Commission of Fish and Fisheries entitled *The Fisheries and Fishery Industries of the United States* (Washington: Government Printing Office, 1887).

Mr. Brown was the author of the second portion of part XV of this publication, entitled *The Whale Fishery,—Whalemen, Vessels, Apparatus and Methods of the Fishery* and in preparing himself for this task he made detailed studies around New Bedford in 1879-1880. In the latter year, too, from his headquarters in the U. S. National Museum in Washington he mailed out to whalemen and boat builders detailed questionnaires (one question per page) the answers to which seemingly supplied him with data he failed to secure when in the field. There is no way of knowing how many questions Brown sent out and most of the answers are unsigned so that there is no indication as to their source. The incompleteness of these data indicates further that a large part of Brown's notes and answers to the questionnaires were lost or destroyed before the remaining file was stored in the Museum library.

There was uncovered, however, some of the correspondence and answers which Brown had had with James Beetle and in the belief that these might prove interesting to AMERICAN NEPTUNE readers, copies made from Beetle's rather difficult longhand scrawl are published herewith. Further documents from this source will be published in future issues.

WHALE BOATS

STATEMENT of James Beetle, New Bedford, Mass.

'Am 69 years old.—Commenced whale-boat building in New Bedford in 1827. Served an apprenticeship under Wm. Cranston a veteran boat builder. Went into business for myself in 1836 and still continue. During this long period I have worked on 2000 boats.

In 1827 the boats were lap streak. In 1833 I invented the batten boat, but built very few of them until 1840 when they began gradually to become popular. It was 1850 before they were generally used.

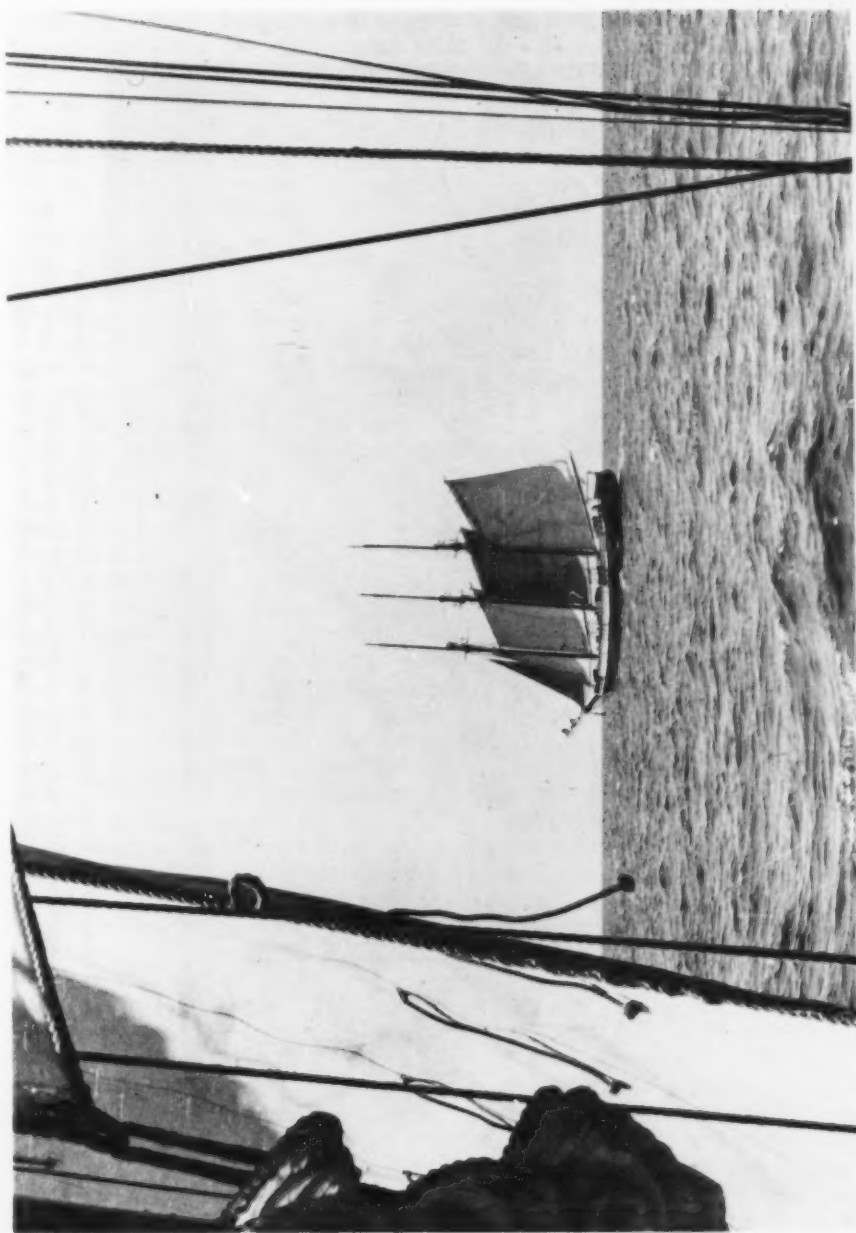
In 1840 or thereabouts centre-boards were invented by a man in New York. Zachariah Hillman of this place built in 1840 a skiff with a centre board in it—this was the first boat of the sort ever seen here. I made a whale boat with centre board in 1841 for ship Samuel Robertson, Capt. Warner. The vessel sailed in a whaling cruise to the Pacific Ocean. Capt. Warner wrote home centre board whale boats were a failure. I was satisfied that when properly made they could not be a failure—kept experimenting on small boats and finally they came popular and now all whale boats have them.

About 1837 I invented the mast hinge for sail boats to allow the lowering of mast when going under bridges etc. Boat *Plutus* of New Bedford was the first to have this hinge. My brother tried one in a whale boat soon after 1840—very few sails were then used in whale boats. Now sails & the hinges are used extensively.

Prior to 1854 whale boats were 22 to 24 inches deep—5 ft. 4 in. wide.

In 1854 made some for barque *Fortune*, 6 ft. wide, 2 ft. 3 in. deep. Since then the width has increased in some cases to 7 ft. The change from narrow to wide boats was gradual.

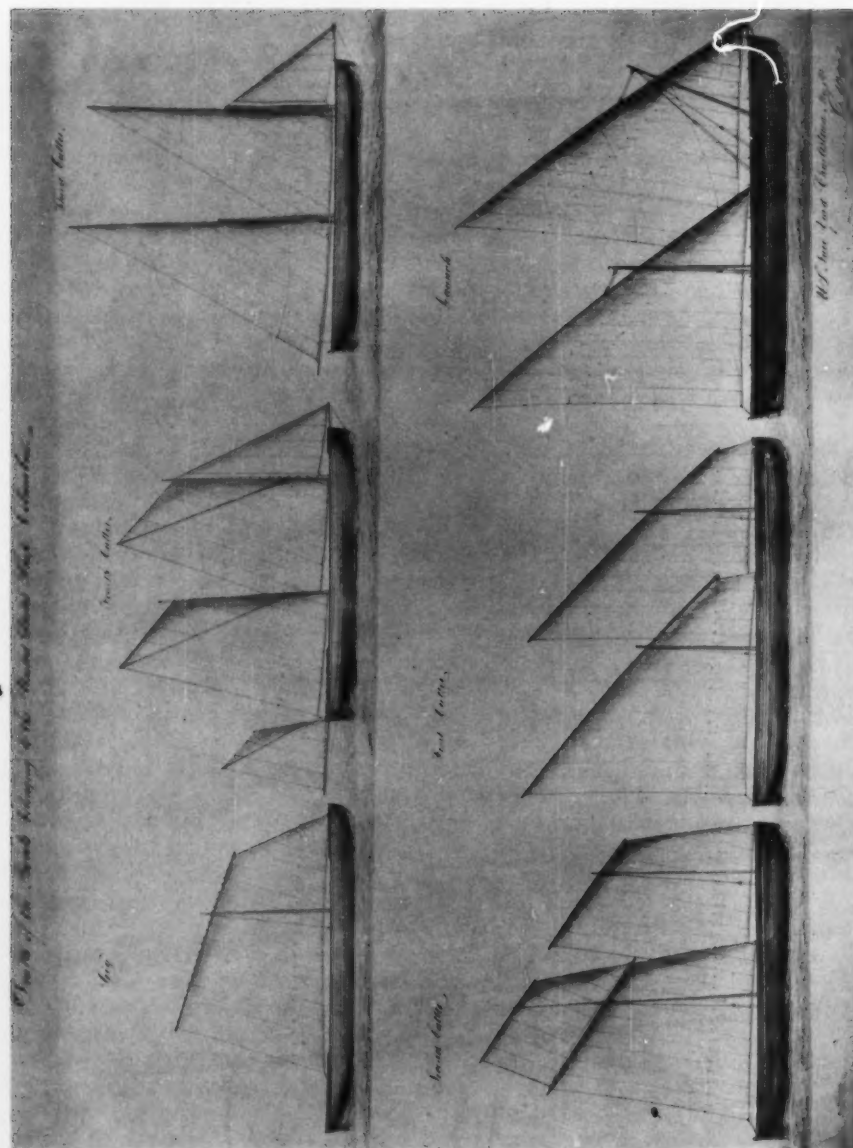
In 1827 the boats were mostly 27½ ft. long. Many shorter than that but none



Schooner *Rebecca R. Douglas* off the Jersey Coast, 27 April 1943

Photograph by H. Lee Platt, C.B.M., U.S.C.G.

For an account of the *Rebecca R. Douglas*, see *THE AMERICAN NEPTUNE. III* (1943), 255-259



longer. Most of them were five-oared. Made a few seven & eight-oared to go to Delago Bay — but the eight-oared boat soon went out of use — was too clumsy to manage.

The bottom of whale boats were round — suited for rowing rather than sailing — a change commenced in 1836 when I built the first boat with plumb sides and straight-timbered at the bottom. This style is now universal. No round bottom boats are now built for whaling.

Up to 1830 used natural crook knees, these becoming scarce, builders wondered what they should do for knees. Capt. Caleb Anthony who was then running the packet ship *Iago* between this country & Havre, France, said to Zachariah Hillman, boat builder in New Bedford, "Why don't you use bent knees as they do in France?"

The plan was tried and bent knees with iron to keep them bent were in some cases used. When Capt. Anthony returned from his next trip he asked how the builders liked bent knees. Said that in France they split the wood in the parts that needed to be bent. We had been using iron to keep them in place. Tried the splitting method & it succeeded first rate. We put knees both under and over the thwarts up to 1835, two for each thwart, ten knees altogether. Now have all top knees, fourteen altogether — seven on a side.

The stem and stern posts were made of natural crook up to about 1820 then Wm. Cranston invented a bending horse in which an iron was used to go on the post to keep it from splitting. Now straight sticks are steamed and bent — using no iron.

Until 1860 we put 46 to 48 timbers in a boat. Now have from 62 to 72 timbers — same size as formerly.

Each chock used to be made of two pieces but now half of them are made of solid pieces.

Invented the solid chock about 1833.

Prior to 1835 it required 20 days labor to build a whale boat for we had to take

the rough boards and prepare them by hand. Now machinery does much work for us and we can build a boat with 120 hours labor.

In the different kinds of whaling there is very little difference in style of boats. The largest boats are always used in Arctic whaling because it is cold work and sometimes the men sleep in the boats. The 29 ft. boat is specially adapted to sperm whaling since it is more convenient in management.'

A. HOWARD CLARK

GUNWALE STREAK or PLANK

[Brown's question. The 'or' is Beetle's insert]

'This term did not originate with me but the streak to which the gunwale is fastened must in truth be a gunwale streak. Want of care on my part in punctuating, crossing t s, and dotting i s, and making r s and o s has given you some trouble to understand my writing for which I am sorry top has been called lap when it meant top. and many names for the same thing has caused some confusion. I have written more since Mr. Clark was here than I have written before for ten years. If I had what was said to Mr. Clark, I could tell if I had left anything out. that I would like to write about. I am perfectly willing to any enquiry you shall be pleased to make to the best of my ability. Please excuse what I am about to write if you really differ from me in your estimate of men and institutions. The daughter of Lewis Cass the courteous statesman was in Rome wishing to make a call on the Pope but there was no claim to the royalty which would entitle her to an audience in the Pontifical mind. But Miss Cass comprehending the true theory of the Government of the United States, said, or claimed being a daughter of one of the sovereign people of the United States her political status was equal to any royalty in the world. She was admitted to an audience with the Pope. As one of the Sovereign People I am willing to give all attention to my responsibilities. I think

it will require some patience to make or collect a literature for boats and boat-building my correspondence with you indicates to me that I might write a prose story boats and the building of them that might be amusing if not as sublime or as well constructed as Longfellow building of the ship and her launching and some future Longfellow might render in song or verse.

Your friend, As ever
JAMES BEETLE'

N. Bedford, March 19, 1880

MR. BROWN

Dear Sir. in answer to your enquiry in regard to the use of smooth boats in preference to lap or clinker I reply lap boat or work is the right name '*Clinker*' a *nick* name representing the peculiar noise the boat makes going over the water. The lip of the keel is but a lap on which to fasten the lower edge of the first '*plank*' '*board*' or '*streak*.' (terms meaning same) '*garboard*,' meaning the first or lower streak the upper edge of which is used for a lap for 2nd streak, 2nd for 3d, 3rd for 4th, 4th for 5th, 5th for 6th, 6, for 7th. In a calm the lap boat makes a clinkering noise originating the name which noise increases with the wind and sea. In a swell quite a crashing sound is made frequently scaring the whale away

and causing its loss. During my apprenticeship the Captains and officers of whale ships were enquiring why whale boats could not be built smooth and avoid the clinking noise a crash and without the great weight of smooth boats as then built. I was into a boat we had jus finished planking noticing a lining piece or batten about six ft. long fastened over a shake or crack in the second streak. My first thought on looking at it was I can make a streak in two pieces by lining and fastening them together. the next thought I can line or batten all the joints as if they were shakes or cracks. At work for myself in 1840 I began the building of Battened or lined steamed boats. lots of men thought lap or clinker best. the smooth casting . . . the sale of were slow I applied for a patent for boats built with a joint like this

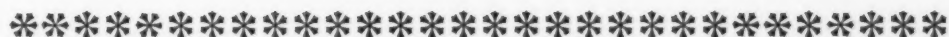


in the edge of the streaks but did not press it to completion.

Cotton wicking placed in the joint and

Kindly your Friend
As ever JAMES BEETLE

Contributed by Carl W. Mitman



Queries and Answers

44. NAHANT CANOE. The Nahant Pilot Canoe is a name applied to a pilot's row-boat, and so it does not represent a real canoe.

H. I. CHAPELLE

45. NORFOLK PILOT BOATS. So far as I could discover, no lines of pilot boats were taken off in 1793-1795 for the Admiralty. At least no plans have turned up for this period. However, it is highly probable that the plan inquired for might have been taken off years after the capture of the vessel. I have never found the Admiralty plans of the pilot boat and the privateer shown by plans in Steele's *Naval Architecture*, and it is possible that one of these is the plan in question. The pilot boats taken off before 1806 are the *Swift* (see my *History of American Sailing Ships*) and *Le Coureuse*, about 55 feet long (whose draught I have a photostat of). I have never been certain when *Le Coureuse* was captured. All the vessels in Steele's and Knowles' books on naval architecture seem to be copies of Admiralty draughts. The Bermuda schooner in Knowles, for example, is the *Ant*, whose Admiralty plan I had photostated before the war.

H. I. CHAPELLE

46. CALEB HANNUM. Information is wanted about Caleb Hannum, who sailed in a whaler out of Nantucket, probably in 1770, and eventually as captain. He was born in 1749 and died in 1834 at Greenwich (probably East or West Greenwich, Rhode Island).

WILLIAM H. HANNUM

47. PATENT DEVICES. Can anyone direct me to drawings or descriptions of Masie's patent pumps, Barbotin plan capstan, and Booth's lanyard screws? These improved devices were used by the Navy Department in 1840 while building the U.S.S. *Missouri* and U.S.S. *Mississippi*, and are supposed to have been installed on those vessels.

THOMAS HORNSBY

48. PHOTOGRAPHS. Are any photographs of the following vessels known to exist:

Schooner *S. L. Bowen*
Bugeye *Mamie and Lillie*
Bugeye *Albert Corl*
Bugeye *Herman Ellis*
Bugeye *Maggie Shearer*
Schooner *George W. Kibble*
Schooner *Frances S. Moore*
Bugeye *Col. S. A. Graham*

M. V. BREWINGTON

49. SHIP'S LOG. What is the origin of the ship's log, and what are the earliest regulations requiring ships to keep logs?

HENRY W. BELKNAP

50. PIGGIN STICK. Information is desired concerning the origin of the name and use of piggin sticks.

JOHN R. HERBERT

51. SHIFTING ENSIGNS. What is the origin of the practice in American men-of-war and merchantmen of shifting the ensign from the taffrail flag staff to the gaff as soon as a ship is under way, and shifting it back when she anchors or ties up? In British men-of-war the ensign remains constantly at the gaff.

J. H. KEMBLE

News

THE MARINERS' MUSEUM

Newport News, Virginia. A colorful exhibit of Mediterranean seaports in the wake of the Allied campaign is on view at The Mariners' Museum. Beginning with Tunis, the campaign has been followed to date with a weekly addition of the point of current action. Tunis, Malta, Pantellaria, Catania, Palermo, Messina, the land where fighting is now in progress, are shown.

Artists and engravers include Nicolas Visscher (1684); Pierre Mortier, a Dutch cartographer (circa 1702); John Part-ridge (1790-1872), a Scottish artist who painted a series of Mediterranean seaports about the year 1830; Nicholas Ozanne (1728-1811), famous also for his complete series of the ports of France; Rouargue (1810-1870), and many others.

An exhibit relative to the Great Lakes will open 1 October which will include more than one hundred water-colors and drawings by G. A. Cuthbertson and others, together with early maps and plans, shown by courtesy of the Canada Steamship Lines, Limited, of Montreal. The pictorial matter as a whole is a splendid record of many ships of those waters from the first known vessel the *Griffin*, launched in 1680, to modern carriers such as the S.S. *Lemoyne*.

Mr. George A. Cuthbertson to whom the work of creating the main part of the historical lakes portion was assigned, a Canadian artist and author of the well-known account of Great Lakes shipping *Freshwater* (New York: Macmillan, 1931),

gathered the greater part of the collection for the Canada Steamship Lines, Limited, who have arranged for it to be shown in various institutions in the United States, and have prepared a brief descriptive catalogue of it. Prior to coming to the Mariners' Museum, the collection was exhibited at the Jefferson National Expansion Memorial of the National Park Service, St. Louis, Missouri, from 19 August to 19 September.

This exhibit will continue for three months. Lithographs, oils and ship models will be included in the exhibit from The Mariners' Museum collection.

PEABODY MUSEUM MARINE ASSOCIATES
Salem, Massachusetts. At the quarterly meeting of the Peabody Museum Marine Associates on 26 July 1943 Mr. Rupert W. Jaques spoke on Ashley Bowen of Marblehead.

NOTES ON CONTRIBUTORS TO THE AMERICAN NEPTUNE

Carl C. Cutler, author of *Greyhounds of the Sea*, is Secretary of the Marine Historical Association, Inc., of Mystic, Connecticut.

Peter Oliver of Mount Kisco, New York, author and publisher of varied interests, has been at work for several years on a history of the year 1800, and draws from his extensive knowledge of American newspapers an account of travel by water in that year.

H. A. Musham of Chicago, Illinois, is a naval architect.

David W. Thomson, who has written other studies of early submarines, is now a private in the Army Air Force.

Book Reviews

RALPH H. BROWN, *Mirror for Americans, Likeness of the Eastern Seaboard, 1810* (New York, American Geographical Society, 1943). 7½" x 10", cloth. xxxii + 312 pages. \$4.00.

One could very well wish that this were one of a series of books rather than a single work, for certainly no picture of the United States as it existed in the past has been drawn quite so clearly and in such compact form. Through the eye of a wise and learned but mythical contemporary American, Mr. Brown has produced a scene: the United States of the year 1810. Thomas Pownall Keystone, although a resident of early nineteenth-century Philadelphia, had all the attributes of the modern geographer, using the word with its broadest meaning, for not only did he describe the topography but he also considered all those factors which today are thought to be a part of the study: climate, population, industry, natural resources and commerce. Each has been treated in just sufficient detail to intrigue one's curiosity. A critical bibliography compiled from the works which would have been found in Keystone's library and the footnotes supplied by Mr. Brown give the materials with which to satisfy the desire to learn more.

In only one or two particulars does the book fall below its high level of scholarship: in the chapter on 'Seaboard Commerce' there are one or two strange omissions such as the opening of trade with India by the ship *United States*, that with Australia by the *Ann and Hope*, and that with the east coast of South America; in the chapter on 'The Chesapeake Country' the implication is given that conditions on the Eastern Shore paralleled those on the Western Shore, something far from the truth; and such definitions as 'Common types of merchant vessels, brigs, snows, and ships, all square rigged. The brig has two masts, the ship, three, and the snow, two with an additional sail near the stern' may perhaps irritate the nautical purist. But aside from these few minor points the book is excellent from the viewpoint of the student, the typographer and the general reader alike.

Old Ship Portraits of Kennebunk (Kennebunk, Maine: The Brick Store Museum, 1943). 5½" x 8½", paper. 20 pages, 13 collotype illustrations. Publication No. 3 of The Brick Store Museum. 50 cents.

The coastal towns of Maine abound in good ship portraits, yet few of these pictures are readily available in adequate reproductions. The Brick Store Museum has had the happy idea of publishing a picture book showing a dozen of the best ship portraits privately owned in Kennebunk, and has carried this idea out in a wholly admirable manner.

The vessels range in date from the brig *Lima*, built in 1830, to the ship *Frank N. Thayer*, built in 1869. The portraits are an interesting and varied collection, and

include a fine pair of Frédéric Roux water-colors of the ships *Bornholm* and *Hartley*. Under each illustration is a brief account of the vessel. At the beginning of the pamphlet is reproduced an architectural reconstruction drawing of the shipyards at Kennebunk Landing in 1860.

As a piece of bookmaking this publication is very attractive. The ship portraits, which were well photographed by Mr. Victor N. Camp, have been reproduced in collotype by the Meriden Gravure Company. The pamphlet is designed and printed by the Southworth-Anthoensen Press. It is to be hoped that it will have a sale that will encourage the Brick Store Museum to issue further publications of similar quality. Both in content and form a lover of ship portraits could not invest half a dollar more profitably.

ALAN BURROUGHS, *John Greenwood in America 1745-1752: A Monograph with Notes and a Check List* (Andover: Massachusetts: Addison Gallery of American Art, 1943). 7½" x 10½", paper. 87 pages, 51 illustrations.

This monograph is a permanent record which developed out of an exhibition of John Greenwood's portraits held at the Addison Gallery in September 1942. It is a valuable contribution to the history of mid-eighteenth-century portraiture in New England. Though it contains reproductions of the portraits of several Massachusetts merchants and ship-owners of the pre-Revolutionary period, the item of chief maritime interest is the large ale-house caricature 'Sea Captains Carousing in Surinam' (p. 45), which Greenwood painted during a stay in Surinam while on his way back to England. It depicts the activities of a group of Rhode Island ship-masters on a spree. Jonas Wanton is in a drunken stupor; Godfrey Malbone dances, with Captain Nichols Powers instructing him, while Esek Hopkins (future luminary of the Navy) raises a wine glass, Captain Nicholas Cook (future governor of Rhode Island) holds a long pipe, and Captain Ambrose Page vomits in Wanton's pocket. It is a promise or a warning of what may happen if one brews too much Peabody Punch,¹ as well as a cheerful record of a sidelight of the Surinam trade.

JOANNA C. COLCORD, *Songs of American Sailormen (with music)* (New York: W. W. Norton and Co., Inc., 1943). 7" x 10", cloth. 212 pages, 7 plates, 6 illustrations and decorated end papers by Gordon Grant. \$4.50.

A new printing of *Songs of American Sailormen* furnishes an opportunity to invite the attention of any readers of the NEPTUNE who are not already familiar with it to one of the most satisfactory and delightful books in American maritime literature. Originally published in 1924 under the title of *Roll and Go*, it was reissued in 1938 by W. W. Norton and Co. in a revised and enlarged edition, which is now deservedly reprinted. Miss Colcord is uniquely qualified by inheritance and experience to deal with her subject, and her research has brought together a rare collection of shanties. Illustrations have been chosen from the extensive and little known gallery of ship portraits at the Sailors' Snug Harbor, and Gordon Grant has supplied

¹ THE AMERICAN NEPTUNE, II (1942), 39-43.

appropriate drawings at the beginning of chapters. The publishers have produced the book in a handsome style, which enhances the pleasure of reading it. Would that all books on the sea were as good as this one.

Steamboat Bill of Facts (Steamship Historical Society of America — Circulation Manager: James T. Wilson, 138-50 Northern Boulevard, Flushing, N. Y.). Numbers 10 (June 1943) and 11 (August 1943). 45 cents each. Subscription included with membership in Steamship Historical Society (\$1.00 per year).

Steamboat Bill, first reviewed in *THE AMERICAN NEPTUNE*, I (1941), 101, was founded in 1940 by Mr. Jay Allen and 'published as a hobby in the interest of steamboat enthusiasts.' Issued in mimeographed form, it has presented much useful information of a specialized sort that might not otherwise have been printed. Starting as a personal venture, it was subsequently adopted as the organ of the Steamship Historical Society, although the greater share of the work continued to fall upon Mr. Allen. In the spring of this year, Mr. Allen felt unable under wartime conditions to continue publication unaided. The present numbers are the consequence of the energetic efforts of Mr. Arthur C. Adams of Norwich, Connecticut, who has, on behalf of the Society, assumed a *pro tempore* editorship. During four years of publication, the quality and interest of *Steamboat Bill* has steadily increased. As the Society and Mr. Adams are making every effort to continue publication through the war period, even though many supporters of normal times are now in service, it is hoped that new subscribers will come forward to assist in this useful undertaking.

THOMPSON KING, *From the Potomac to the Thames, being the Progress of one James Rumsey (1743-1792)* (Princeton University Press, for The Newcomen Society of England, American Branch, 1943). 6" x 9", paper, 32 pages, illustrated.

An interesting address by an engineering executive of the Consolidated Gas Electric Light and Power Company of Baltimore delivered on 24 June 1943 at a Newcomen Society Dinner in Baltimore. Typical of Newcomen Society publications, a full third of the paper content is devoted to such extraneous matter as: 'remarks' of the Vice President; imposing roster of Society members; memorial to Lord Lothian; reproductions of Bewick woodcuts of dogs, reindeer, apothecary signs, and fantastically 'dreamed-up' sailing vessels. It seems a pity that padding of this sort is used in all Newcomen publications, for in many instances including this one the real material appears worthy of a more dignified dress.

V. R. GRIMWOOD, *American Ship Models and How to Build Them* (New York: W. W. Norton and Co., Inc., 1942). 7½" x 10", cloth. 187 pages, 14 folding plates, 38 line cuts. \$6.00.

Most books on ship model building inspire the production of a tiresome quantity of *Santa Marias*, *Mayflowers*, *Constitutions* and *Flying Clouds*, built by enthusiasts whose technical and historical knowledge is hardly adequate to make a decent dory.

Mr. Grimwood's plan of starting with a simple model and working towards more ambitious subjects is a worthy one. Likewise the choice of examples is to be highly commended, for he has placed all the shop-worn old favorites on the shelf, and has gone to the fresh material of local types: the skipjack and bugeye of the Chesapeake, the gundalow of New England and the scow schooner of San Francisco among others.

Yet in spite of the virtues of its planning, the defects in execution will prevent this book from improving standards of model building. The drawings are incomplete and filled with errors. The text is loosely written, showing inexperience at exposition in the efforts to give technical instruction and betraying the use of second-hand hearsay in the attempts at supplying historical background. Similarly, the publishers, having given the book an attractive format, stopped there and neglected to read proof. The list of plates, for instance, calls for material not included in the book, to say nothing of jumbling that which is included.

Americans Who have Contributed to the History and Traditions of the United States Merchant Marine (Kings Point, New York: Educational Unit, U. S. Merchant Marine Cadet Corps, 1943). 5"x 6½", cloth. xviii + 217 pages, numerous illustrations.

The United States Merchant Marine Cadet Corps has named buildings, training vessels, docks and roads at the Merchant Marine Academy at Kings Point, New York, and the Cadet Basic Schools at Pass Christian, Mississippi, and San Mateo, California, for men who are remembered for their contributions to the building, expansion and prestige of our merchant marine. This little book contains portraits and brief sketches of these men—shipbuilders, owners, masters, engineers and others—ranging in date from the sailor Jean Louis (1690-1736) who founded the Charity Hospital of Louisiana to Cadet-Midshipman Edwin J. O'Hara (1923-1942) who died heroically in the present war. It should do much to enliven the interest of the cadets in the great tradition which they must now carry on.

Abel Janszoon Tasman and the Discovery of New Zealand (Wellington, N. Z.: Department of Internal Affairs, 1942). 8" x 10", paper boards. 66 pages, illustrations.

The Government of New Zealand, in commemoration of the tercentenary of the first discovery of the country, has published a new translation by M. F. Vigeveno of portions of the 'Journal or description by me, Abel Janszoon Tasman, of a voyage made from the city of Batavia in the East Indies for discovery of the unknown south land, in the year anno 1642,' together with a poem by Allen Curnow, 'Landfall in unknown seas,' and an essay by J. C. Beaglehole on 'The place of Tasman's voyage in history.' Charts, landfalls and autographs are reproduced in facsimile. The book is a dignified and handsome piece of printing, entirely in keeping with the great event it commemorates, and sets a standard that might advantageously be sought after in other modern publications on Pacific exploration and voyages.

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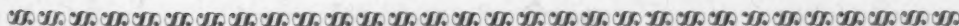
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